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PLANT PEST CONTROL DIVISION

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AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GRASSHOPPERS moving to crops in Idaho and New Mexico. Troublesome in areas of California. Counts reduced in western Kansas counties by control program. (p. 577). EUROPEAN CORN BORER eggs as far north as Muskegon-Bay City line in Michigan. Feeding heavy on central Iowa corn. Pupation complete and some emergence in several States. (p. 578). ARMYWORM damaging in Illinois, Kansas and Nebraska; larval counts high in Kansas. (p. 579).

CHINCH BUG heavy in Texas and Oklahoma. (p. 579). CORN EARWORM continues to increase in Alabama and is heavy in Oklahoma. (p. 579). Damaging beans in North Carolina. (p. 588). CLOVER SEED WEEVIL reported in Illinois for first time. (p. 582).

PLUM CURCULIO very abundant in North Carolina peaches. (p. 584).

COLORADO POTATO BEETLE more abundant in Idaho than in past years. (p. 586). Fourth POTATO PSYLLID survey in Colorado, Wyoming and Nebraska. (p. 586). STRIPED CUCUMBER BEETLE abundant and damaging in several States. (p. 587). SQUASH BUG numerous in areas of Oklahoma and New Mexico. (p. 587). MEXICAN BEAN BEETLE moderately damaging to beans in Delaware and abundant in South Carolina. (p. 587). BEET LEAFHOPPER becoming active on tomatoes in southern Idaho. Curly top increasing in Utah. (p. 588).

TARNISHED PLANT BUG moderate on Alabama cotton and light to heavy generally over delta counties of Mississippi. (p. 590).

Court decision announced on GYPSY MOTH case, Long Island, New York. Survey in Pennsylvania. (p. 591).

CORRECTIONS. (p. 595). ADDITIONAL NOTES. (p. 593).

INSECTS not known to occur in the United States. (p. 597).

WEATHER BUREAU 30-DAY OUTLOOK

JULY 1958

The Weather Bureau's 30-day outlook for July calls for temperatures to average above seasonal normals in the southern half of the country from the Rockies to the Atlantic. Below normal temperatures are anticipated in the Plateau region and also in states along the northern border from the Great Lakes to the Pacific. In areas not specified temperatures should average not far from normal. Rainfall is expected to exceed normal in the Upper Mississippi Valley, Northern Plains and Pacific Northwest. Near normal amounts are predicted over New England, the Great Lakes region, the Central Plains and the Gulf and South Atlantic Coasts. In the remainder of the nation subnormal rainfall is in prospect.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 a half year.

WEATHER OF THE WEEK ENDING JUNE 30

Temperatures for the week, featured by a record-breaking cool snap for late June in the mid-Continent area, averaged below and above normal east and west of the Continental Divide, respectively. The cool snap occurred June 24 to 27 as cold air from Canada, pouring in behind an extensive area of low pressure centered over the Great Lakes, covered all the Nation except the extreme Southwest. Lowest temperatures ranged from the 50's in Texas and the lower Mississippi Valley to the 30's and 40's near the Canadian Border. New record lows for so late in June were reported from scattered points throughout the Mississippi Valley and Great Plains, and many stations in Texas recorded their lowest on record for the month of June on the 26th and 27th. A low of 25° occurred at Pactola Dam, S. Dak., and damage to gardens and beans in the State occurred in spotted areas. Bemidji, Minn., recorded 27° on the 23d, but no crop damage was reported from that State. Unseasonably cool weather has now prevailed for 2 months in the Northeast, and early figures indicate the coolest June on record at several northeastern stations. These stations include New Haven and Hartford, Conn., and Providence, R. I. At Philadelphia, Pa., the June average of 67.8° was the lowest since 1907.

Most of the week's rainfall occurred along the leading edge of cold air as it moved across the Nation. Totals, although varying greatly in short distances, generally ranged from 1/2 to 2 inches from the eastern Great Plains to the Atlantic coast and in scattered sections of the Northwest. Many local thunderstorms produced 3 to 6 inches, but heavy rains did not occur over extensive areas as in previous weeks and no serious flooding developed. Flood waters at most points along the White and Wabash Rivers in Indiana had receded by the end of the week, leaving farmers with the problem of replanting. Rains of the past week still did not bring enough moisture to some extreme north central areas. Wisconsin reports that the soil generally is too dry and that most streams and lakes are low. Moisture is short in southeastern South Dakota, northern North Dakota, and northeastern Montana. Precipitation in the dry areas of Montana and North Dakota for the period January 1 to June 30 remains about 50 percent of normal. Severe thunderstorms with damaging hail developed in many northern areas along the leading edge of cold air which produced the midweek cool snap, but no outstanding single storm was reported. Severe windstorms occurred in the central Columbia and Snake River Basins of Oregon on the 23d, and high winds in California on the 29th measured 75 m.p.h. at Point Reyes, and 44 m.p.h., in gusts at the San Francisco Airport. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - NEVADA - Nymphs extremely heavy in Pahranaagat Valley, Lincoln County, and damaging alfalfa and corn. (Bunker, June 20). SOUTH CAROLINA - Unusually numerous on permanent pastures near Clemson. (Nettles et al.)

MONTANA - Grasshoppers and crickets present in large numbers in at least 7 areas of northern Cheyenne Indian Reservation. Northeastern counties infested with Melanoplus bivittatus and M. bilituratus. (PPC, West. Reg., May Rpt.).

WYOMING - Hatching observed in many sections of State during May. Infestations that were heavier than in 1957 were observed in Goshen and Platte Counties, May 21. (PPC, West. Reg., May Rpt.). IDAHO - M. bilituratus, mostly fourth instar nymphs, 35 per square yard moving from wasteland to adjacent wheat field margins in Michaud Flats area near American Falls. (Gittins). Camnula pellucida, largely third instar, up to 200 per square yard in small area near Moyle Springs, Boundary County. (Portman). OKLAHOMA - Averaged 3-10 per square yard generally on rangeland and roadsides in southwestern counties. Light general damage to crop margins. (Hudson, Hatfield). Generally very light, 2-5 per square yard, in northeastern range area. Melanoplus spp. and Mermeria sp. predominant forms. (Coppock). UTAH - Several areas of abundance in Uintah, Duchesne, Grand, Emery and San Juan Counties. Damaging gardens in several locations. (Knowlton). TEXAS - Heavy in Sherman County, attacking grass and sorghums. (Goule). CALIFORNIA - M. devastator heavy, migrating across highway for several miles each side of Sloughhouse area, Sacramento-Amador County line. Heavy damage to dryland pastures, Menlo Park area, San Mateo County. In Stanislaus County, averaged 35 per square yard in Salida area, about 90 percent M. devastator and 10 percent Oedaleonotus enigma. High numbers on ditch banks and drainage canals, San Joaquin County. Controls begun. No nymphs of Camnula pellucida in Alpine County area treated in 1957. (Cal. Coop. Rpt.). MINNESOTA - Hatching and development in western and central districts delayed by cool weather. Nymphs of M. bivittatus mostly first and second instars, some third and fourth, Clay, Wilkin, Pope and Stearns Counties. Ranged from less than 5 to 20 per square yard along margins and roadside ditches. M. femur-rubrum hatch confined to occasional favored location, eggs from eye-spot to full development. (Minn. Ins. Rpt.). MISSOURI - Spotted, common along field margins throughout northwest area, with 0-16 per square yard. No crop damage observed. (Kyd, Thomas). NEW MEXICO - Leaving dry ranges, moving into crops in Luna County. Heavy damage in spots. Damaged alfalfa and grain near Isleta, Bernalillo County. (N. M. Coop. Rpt.). KANSAS - Cooperative Federal-County control program about 85 percent complete in western counties. Roadsides treated by air in 6 counties and by ground equipment in 12 additional counties. Federal and State highways and railroad right-of-ways included in program. Roadside counts reduced from highs of 250 per square yard to less than 5. Untreated roadsides, lanes, fence rows, etc. Still range to 90 per square yard but generally 30-60. M. bivittatus, M. bilituratus, and Aeoloplides turnbulli dominant species. Range-feeding species generally averaged 20 per square yard with Aulocara elliotti and Phlibostroma quadrimaculatum the dominant species with many other species making up the range complex. Feeding on range grass readily observed, but heavy growth of range cover overshadows damage in most areas. Heavy flight on June 26. Threatening to severe in most areas in north central counties, often throughout whole fields of alfalfa and wheat. Damage to corn along field margins where no controls have been applied. Averaged 15-45 per square yard in this area, M. bivittatus and M. differentialis the dominant species, with fewer numbers of M. bilituratus. (Matthew).

MORMON CRICKET (Anabrus simplex) - UTAH - Reportedly hatched in Forchea Mountains, Piute County. (Knowlton).

BILLBUGS - SOUTH CAROLINA - Caused some severe localized damage, Clarendon County. Outstanding results noted in control in Clarendon, Williamsburg, Horry and Florence Counties. Estimates in Florence County indicate 50 percent of corn acreages infested and that 25 percent of crop will be lost to this insect. (Nettles et al.).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - MASSACHUSETTS - Moths and first eggs, June 9. (Wheeler). NEW JERSEY - Borers have hatched but eggs still being laid in Burlington County area June 17. (Ins. Dis. Newsl.). PENNSYLVANIA - Newly hatched larvae on corn tassels, Northampton and Lehigh Counties. (Menusan). MARYLAND - First-brood egg-laying about complete. Infestation generally light. Some large fields on Eastern Shore 30-60 percent infested. (U. Md., Ent. Dept.). VIRGINIA - Severe on corn on 3-4 farms, Northumberland County. (Saville). Damaged corn in Franklin County, but large numbers of parasitic wasp cocoons present. (Rowell, Tucker). ALABAMA - First-generation larvae continue destructive in corn in northern part of State. Most are full-grown but no pupae have been observed. A larva collected in a Randolph County garden plot on June 22 is first for this county. (Guyton). WISCONSIN - Hatching begun in Grant, Crawford and Rock Counties. Infestations light on advanced field corn and market sweet corn. About 40 percent hatched. (Wis. Coop. Sur.). MINNESOTA - Moth emergence approximately 75 percent in southern half of State. Cool weather has restricted moth activity and egg counts remain low, highest was 24 egg masses per 100 plants in a field of early corn in Rock County. Most averaged 0-4 egg masses per 100 plants. (Minn. Ins. Rpt.). MICHIGAN - Laying eggs as far north as the Muskegon-Bay City line. Corn development is late. (Hutson, June 20). ILLINOIS - Pupation complete throughout State, moth emergence complete except in northern 2 tiers of counties where it varies from 50-75 percent. Generally borers are more noticeable in west side of State than on east. Egg-laying practically complete in western section north of St. Louis. Egg-laying still low in northwestern section, cold nights have prevented moth flights and egg-laying. Egg-laying just beginning in north-eastern section. (Ill. Ins. Rpt.). INDIANA - Corn 36 inches tall averaged one infested plant per 100 in northern area. Fifty-four inch corn in Newton County averaged 3 infested plants per 100. Larvae in first instar. No egg masses found. (Gould).

IOWA - Development delayed by cool weather. In central third of State feeding ranged 28 percent on 36-inch corn to 96 percent on 40-50 inch corn, with 2-8 first-instar larvae per plant and 10-36 unhatched egg masses per 100 plants. In northern third of State feeding ranged 0-80 percent on 30-40 inch corn with 6 first-instar larvae per plant and 0-40 unhatched egg masses per 100 plants. (Iowa Ins. Inf.). MISSOURI - In central area emergence, egg-laying and hatch completed, larvae mainly third instar, range first to fifth. Some entering stalks of earliest planted corn. In northwest, emergence is 95 percent complete. Cool weather slowed egg-laying but egg masses averaged 10-36 per 100 stalks. Larvae in first to third instars. (Kyd, Thomas). ARKANSAS - Larvae pupating, numerous in northeast, east and southeast areas. Moth emergence anticipated July 5-10. (Ark. Ins. Rpt.). OHIO - Pupation completed, emergence and oviposition extremely slow. Egg masses per 100 plants were 4 at Columbus, June 17; 2 at Marietta, June 18; 3 at Milan and 2 at Toledo, June 18; 5 in Putnam County, June 24. All on earliest sweet corn in each area. (Triplehorn). OKLAHOMA - In sweet and dent corn, Payne County, and sweet corn at Bixby, Tulsa County. First generation about 30 percent pupated at Bixby. (Arbuthnot). NORTH DAKOTA - Pupation complete in southeastern section. Some moth emergence in Richland County. (N. D. Ins. Rpt.). SOUTH DAKOTA - Egg masses averaged 59 per 100 plants with 37 percent of plants showing shothole injury in southeast area. Larvae, predominantly first instar, averaged 310 per 100 plants. In east central area egg masses averaged 24 per 100 plants with 2 percent of plants showing injury. First-instar larvae averaged 15 per 100 plants. (Hantsbarger).

BLACK CUTWORM (*Agrotis ypsilon*) - DELAWARE - Caused noticeable damage to sweet corn near Bridgeville. (Conrad). VIRGINIA - Catches of adults unusually high in light trap on the Eastern Shore. (Morris). COLORADO - Appearing in light traps in Baca County. (Exp. Sta.).

ARMYWORM (*Pseudaletia unipuncta*) - DELAWARE - Heavily damaged approximately 20 percent of first 4 rows of corn adjacent to rye, central Sussex County. (Conrad). PENNSYLVANIA - Usually spotted in hilly areas, Fayette County. Not migrating. Not expected to be serious. (Udine). VIRGINIA - Attacks on nearly mature rye on the Eastern Shore. (Hofmaster). Medium on small grain and corn in one area of Bland County. (Mallory). Severe in corn and timothy in 2 Smyth County locations. (Eller). OHIO - Destructive numbers appeared in number of fields in Butler County, in early June. (Flake). ILLINOIS - Damaged small grain and grass in scattered spots throughout State, particularly in northwest. As many as 12 per square foot have been reported. (Ill. Ins. Rpt.). MISSOURI - Parasites, predators and diseases have almost eliminated problem in extreme northwest area. (Kyd, Thomas). MINNESOTA - No reports of damage. Few moths taken in light traps at Fergus Falls. Pupae observed in Otter Tail County. (Minn. Ins. Rpt.). NORTH DAKOTA - Few larvae in barley and wheat, some locations in southeastern section. (N. D. Ins. Rpt.). SOUTH DAKOTA - Scattered reports of non-economic larval infestations from Union, Clay and Haakon Counties. (Hantsbarger). KANSAS - Continued to damage wheat and down barley in north central fields. Up to 80 per square foot in localized areas under lodged heavy plant growth. Some movement from small grain to corn and sorghum. (Marvin).

CHINCH BUG (*Blissus leucopterus*) - PENNSYLVANIA - Few on corn, Northampton and Lehigh Counties. (Menusan). SOUTH CAROLINA - Seriously affecting several small corn fields, Saluda County. (Nettles et al.). OKLAHOMA - Heavy on corn, sorghum and Bermuda grass in eastern section, lighter in extreme northeast. (Coppock, Washum). TEXAS - Heavy in Kaufman County, attacking corn and grain sorghum. (Davis).

A COLASPIS (*Colaspis* sp.) - MISSOURI - Widely scattered infestations continued to damage small corn, soybeans and grain sorghums in central and northeastern areas. All severe infestations in fields which were in lespedeza in 1957. (Kyd, Thomas). TENNESSEE - Larvae damaged few soybeans and young corn fields in western part of State. (Mullett).

CORN EARWORM (*Heliothis zea*) - NEW JERSEY - One egg found in examining 50 silks in sprayed field in Burlington County June 18. (Ins. Dis. News1.). DELAWARE - Increased in early field corn, western Sussex County. Small numbers in Kent County alfalfa. (Conrad). MARYLAND - Larvae in whorls of early sweet corn at McGinnis. (U. Md., Ent. Dept.). VIRGINIA - Damaged peanuts in Sussex County (Amos, Parson) and feeding on whorls of corn in many fields over State (Morris). NORTH CAROLINA - Averaged less than one egg per silk on sweet corn at Faison, Duplin County. (Farrier). SOUTH CAROLINA - Numerous in Pee Dee area. (Nettles et al.). ALABAMA - Continued to increase in northern and southern areas. Seriously attacked 300 acres of corn in Coffee County. Almost 100 percent of ears of early maturing corn damaged in north central part of State. (Grimes). IOWA - Eggs on fresh corn silks in Muscatine County. (Iowa Ins. Inf.). OKLAHOMA - Heavy in east central and northeastern sections, except extreme northeastern counties. Damage severe to sweet corn in Bixby area, Tulsa County, and eggs averaged 40 per silk mass. Up to 9 larvae per corn ear noted. (Walton, Coppock). TEXAS - Occurring on grain sorghum heads. (Randolph).

CORN LEAF APHID (*Rhopalosiphum maidis*) - ALABAMA - Spotted in Elmore and Bibb Counties. (Grimes). IOWA - Few on corn in central area, and reported on grain sorghum in Taylor County. (Iowa Ins. Inf.). WISCONSIN - Has built up large colonies on barley in some locations. (Wis. Coop. Sur., June 20). NORTH DAKOTA - Mixed with English grain aphid in small grain fields throughout southeastern area. Non-economic, but increased over preceding week. (N. D. Ins. Rpt.). SOUTH DAKOTA - Small colonies appearing on eastern corn and sorghum. (Hantsbarger).

CORN ROOT APHID (Anuraphis maidi-radicis) - MARYLAND - Light to moderate on field corn, Kent and Charles Counties. (U. Md., Ent. Dept.).

CUTWORMS - MASSACHUSETTS - Continued destructive in many alfalfa fields. (Wheeler, June 20). WISCONSIN - Damage to late-planted sweet corn continued, but appeared to be light in most fields. (Wis. Coop. Sur.)

DUSKY SAP BEETLE (Carpophilus lugubris) - DELAWARE - Increased in sweet and field corn, Sussex County. (Conrad).

FALL ARMYWORM (Laphygma frugiperda) - ALABAMA - Increased in corn throughout southern and central areas. Has been very destructive to all corn crops this year. (Ruffin). LOUISIANA - Light, scattered on corn in Caddo and Bossier Parishes. (Spink).

FLEA BEETLES - OKLAHOMA - Seriously damaged young broomcorn, Garvin County. (Henderson). Some damage to late-planted corn and sorghums in eastern counties. (Coppock). ILLINOIS - Chaetocnema pulicaria averaged 2-3 per corn plant in southern part of State. (Ill. Ins. Rpt.). TENNESSEE - Various species heavily injured young corn fields in western area. (Mullett).

GARDEN WEBWORM (Loxostege similalis) - KANSAS - In eastern area alfalfa fields and moderate to severe webbing in many fields where not controlled. (Burkhardt). MISSOURI - Heavy damage continued to small corn, soybeans and alfalfa over southwest area. Very light numbers on these crops in northwest area. (Kyd, Thomas). ARK. - Numerous in alfalfa, considerable damage several areas. (Ark. Ins. Rpt.). TEXAS - Numbers decreasing in alfalfa. (Randolph). LOUISIANA - Drastic decline on alfalfa, Caddo and Bossier Parishes. Some infestations on corn and soybeans in Concordia Parish. (Spink).

JAPANESE BEETLE (Popillia japonica) - DELAWARE - Single specimen found on field corn, New Castle County, and several observed feeding on more advanced soybeans, Kent County. (Conrad). NORTH CAROLINA - Adults injured soybean and corn on several farms in Craven and Pamlico Counties. (Jackson, Jones). Adults emerged in Guilford County. (Farrier). WEST VIRGINIA - Adults appearing in southern counties. (W. Va. Ins. Sur.).

SLUGS - PENNSYLVANIA - Rain and cool weather have been favorable for slug injury which is quite heavy and general on corn in southern half of State. (Pepper).

SORGHUM WEBWORM (Celama sorghiella) - TEXAS - Building up in grain sorghum, first generation pupating. (Randolph).

SOUTHERN CORNSTALK BORER (Diatraea crambidoides) - ALABAMA - Damage moderate in Etowah County. (Ruffin).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - OKLAHOMA - First generation pupation approximately 75 percent at Bixby, Tulsa County. (Arbuthnot). ARKANSAS - Larvae pupating in Pulaski, Lonoke and Jefferson Counties. Second-generation emergence anticipated July 5-10. (Ark. Ins. Rpt.). LOUISIANA - Light on corn in Caddo and Bossier Parishes. Majority in pupal state. (Spink).

SUGARCANE BEETLE (Euetheola rugiceps) - NORTH CAROLINA - Injured corn in scattered areas with 10 percent loss to 5 acres in Bladen County. (Whaley, Farrier).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - TENNESSEE - General, although not heavy in western part of State. (Mullett).

SUGARCANE BORER (*Diatraea saccharalis*) - LOUISIANA - Second-generation larvae in first, second and third instars heavy on corn at Crowley. Eggs and small larvae extremely light at Simmesport. From 45-88 percent of first-generation larvae in sugarcane have pupated and 12-50 percent have emerged. Number of second-generation young larvae increasing. (Spink).

BROWN WHEAT MITE (*Petrobia latens*) - UTAH - Moderate to sometimes severe in some grain fields, Juab, Tooele, Salt Lake and Box Elder Counties. (Knowlton).

ENGLISH GRAIN APHID (*Macrosiphum granarium*) - WISCONSIN - Appear to be diminishing in small grain in Dodge County. (Wis. Coop. Sur.). MINNESOTA - Continued high in many fields in northwest district, some reduction in individual fields. Populations vary greatly, 8-250 per linear foot of row. Predators continue low. Few fields have been treated. (Minn. Ins. Rpt.). SOUTH DAKOTA - Heavy on small grains, principally oats, throughout eastern area. Up to hundreds per plant in some fields. (Hantsbarger). NORTH DAKOTA - Non-economic in most southeastern small grain fields. (N. D. Ins. Rpt.). IDAHO - Apparently building up in wheat fields near Genesee, Latah County. (Smith). UTAH - Generally scarce on barley and wheat throughout most of State. (Knowlton). NEVADA - Developing economic populations 2-3 weeks earlier than in previous years. Cool weather has been favorable for this increase. High, several wheat fields, Pershing, Churchill Counties. (Bechtel et al., June 20).

SAY STINK BUG (*Chlorochroa sayi*) - IDAHO - General throughout central and eastern areas. Most abundant in Twin Falls area, eastern Jerome County and north of Preston. Egg clusters abundant in some fields. (Gittins).

STINK BUGS - ALABAMA - *Nezara viridula* heavy on soybeans and other crops in Baldwin County. (Grimes). NEW MEXICO - Building up rapidly in most crops throughout State. Light on grain in Taos, Rio Arriba, Bernalillo and Santa Fe Counties. Averaged 8 per sweep in wheat at Estancia, Torrance County. (N. M. Coop. Rpt.). ARIZONA - Adults averaged 2-5 per 10 sweeps in Graham and Pinal Counties. (Mendenhall, June 19). NEVADA - Have developed extremely heavy populations on native vegetation in most areas of State. Now moving to cultivated crops. (Bechtel, June 20).

ALFALFA LOOPER (*Autographa californica*) - UTAH - Common, occasionally numerous, in alfalfa, Weber and Box Elder Counties. (Knowlton).

ALFALFA WEEVIL (*Hypera postica*) - MASSACHUSETTS - Collected from additional 27 towns, now in 10 counties. Noticeable damage in 2 fields. (Wheeler, June 20). PENNSYLVANIA - Five fields infested in Fayette County near West Virginia border. New county. Retarding second-cutting in Mifflin County. (Udine). Decrease in southeast area. (Mensan). IDAHO - Has caused below normal damage generally throughout eastern part of State. (Gittins). UTAH - Serious in unsprayed Wasatch County fields. Severe to moderately severe over most of Uintah and Duchesne Counties. (Knowlton).

BLISTER BEETLES - SOUTH DAKOTA - *Epicauta fabricii* continues heavy, up to 30 per 10 sweeps, in alfalfa in some areas. (Hantsbarger). VIRGINIA - Caused spotted, localized damage to alfalfa near Lexington, Rockbridge County. (Woodside). Medium on alfalfa in one area of Grayson County. (Simpson).

CLOVER LOOPER (*Caenurgina crassiuscula*) - CALIFORNIA - Heavy in alfalfa plantings in Fresno area, Fresno County. (Cal. Coop. Rpt., June 20).

CLOVER SEED WEEVIL (*Miccotrogus picrostris*)- ILLINOIS - Collected near Fulton, Whiteside County, June 4. First record for State. (Ill. Ins. Rpt.).

CLOVER ROOT CURCULIO (*Sitona hispidula*) - IDAHO - Averaged 3-4 larvae per red clover root near Nampa. (Waters).

A CLOVER WEEVIL (*Hypera meles*) - RHODE ISLAND - Larvae more abundant than usual in alfalfa fields. (Kerr).

FALSE CHINCH BUGS (*Nysius* spp.) - UTAH - Serious in alfalfa in some areas. Nymphs abundant in many areas. (Knowlton). TEXAS - Heavy in several areas of west and central parts of State. (Garner).

LESSER CLOVER LEAF WEEVIL (*Hypera nigrirostris*) - CALIFORNIA - Heavy on mixed green pastures at Woodfords, Alpine County, along with an aphid, *Macrosiphum* sp. (Cal. Coop. Rpt.).

LYGUS BUGS (*Lygus* spp.) - PENNSYLVANIA - *L. lineolaris* up to 4 per sweep in alfalfa in southwestern part of State. (Udine). LOUISIANA - *Lygus lineolaris* light to moderate in alfalfa in Caddo and Bossier Parishes. (Spink). SOUTH DAKOTA - Up to 40 per 10 sweeps in alfalfa in southeast and east central areas. (Hantsbarger). UTAH - adults and nymphs numerous in alfalfa fields, Duchesne and Uintah Counties. (Knowlton). TEXAS - averaged 3-7 per 5 sweeps in alfalfa. (Randolph). NEW MEXICO - Building up rapidly in alfalfa throughout State. Considerable damage to seed alfalfa in four counties. (N. M. Coop. Rpt.). ARIZONA - Damaged alfalfa in Graham and Pinal Counties. (Mendenhall, June 19).

MEADOW SPITTLEBUG (*Philaenus leucophthalmus*) - ILLINOIS - Adults very abundant in legumes in northern area; as many as 100 per sweep. (Ill. Ins. Rpt.). VIRGINIA - Heavy on alfalfa in Grayson County. Averaged 5-12 per plant in one field. (Simpson).

PEA APHID (*Macrosiphum pisi*) - MINNESOTA - Continued high in alfalfa in south central, southwest and west central districts. (Minn. Ins. Rpt.). ILLINOIS - From 220-3200 per 100 sweeps in alfalfa and clover over the State. (Ill. Ins. Rpt.). SOUTH DAKOTA - Cool weather favoring high populations in many areas; 100 per sweep. (Hantsbarger). NEVADA - Generally moderate to heavy in alfalfa in most areas of State, particularly northern half. Controls applied in some areas. (Bechtel, et al., June 20). NEW MEXICO - Moderate in most alfalfa in northern area. (N. M. Coop. Rpt.).

POTATO LEAFHOPPER (*Empoasca fabae*)- PENNSYLVANIA - Increasing in southeast area. (Menusan). Less than 1 per sweep in Fayette. Few nymphs. (Udine). ILLINOIS - Nymphs appearing in alfalfa in southern half of State. Adults average 137 per 100 sweeps in west southwest section. (Ill. Ins. Rpt.). MARYLAND - Continues light. (U. Md., Ent. Dept.).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - TENNESSEE - Light in Knox County. (Hammett). OKLAHOMA - Extremely low in east central and north-eastern counties. (Coppock). TEXAS - Medium to heavy, up to 200 per sweep. (Randolph).

SWEETCLOVER APHID (*Myzocallidium riehmii*) - IDAHO - Throughout Boundary County. (Portman). NORTH DAKOTA - One seedling sweetclover field has 100 percent infestation of 6-8 aphids per plant in Ransom County. (N. D. Ins. Rpt.).

THREE-CORNERED ALFALFA HOPPER (*Spissistilus festinus*) - TEXAS - Averaged 5-25 per 5 sweeps in alfalfa. (Randolph). LOUISIANA - Light generally in blooming alfalfa, Caddo and Bossier Parishes. (Spink).

VETCH BRUCHID (Bruchus brachialis) - TEXAS - Emerging from combined vetch. Infestation 25-50 percent in untreated fields. Fair to good control obtained by application of insecticides. (Randolph).

BEAN LEAF BEETLE (Certoma trifurcata) - MINNESOTA - Checks in Mankato area, Blue Earth County, indicate high populations in many soybean fields. Feeding heavy on fields adjacent to alfalfa, defoliation up to 80 percent in many fields. (Minn. Ins. Rpt.).

RED-NECKED PEANUTWORM (Stegasta basqueella) - OKLAHOMA - Second-generation larvae appearing in all peanut fields checked, Payne and Caddo Counties. (Walton).

THRIPS - SOUTH CAROLINA - Affected peanut foliage in Florence area. (Nettles et al.). ALABAMA - Frankliniella fusca medium on peanuts. (Eden, June 7). TEXAS - Frankliniella sp. damaged peanuts in Anderson, Grimes County. (Stephenson). NORTH DAKOTA - Averaged one adult per stem in barley, southeastern section. (N. D. Ins. Rpt.). NEW MEXICO - Generally heavy in alfalfa over State. (N. M. Coop. Rpt.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - DELAWARE - Feeding on soybeans, southwestern Sussex County. (Conrad). NORTH CAROLINA - Injured soybeans on several farms, Pamlico County. (Jones).

A CHINCH BUG (Blissus leucopterus insularis) - MISSISSIPPI - Very numerous on St. Augustine grass on lawns, Pearl River County, and a serious pest in Jackson County. (Merkel et al.).

EUROPEAN CHAFER (Amphimallon majalis) - NEW YORK - In light flights since June 18 in earliest locations, majority still larvae and pupae in later areas of wet soil or heavy vegetation. Heavy adult flights not expected until first or second week of July in western part of State. (Tashiro).

SOD WEBWORMS (Crambus spp.) - ARIZONA - Damaged dichondra and lippia lawns in Phoenix area. (Mendenhall, June 19). OKLAHOMA - Damaging golf greens in several northern cities. Averaged one larva per square inch at Stillwater. (Howell). KANSAS - In localized areas in Cloud and Trego Counties. (Marvin).

WHITE GRUBS (Phyllophaga spp.) - KANSAS - Continued damage to bluestem range in flint hill area of Wabaunsee, Geary, Pottawatomie and Riley Counties. New infestations found in Osage County. Averaged 7-8 per square foot in infested areas. Dead spots in range increased in size from 5 acres to 10-12 acres. Grubs still near surface, no evidence of pupation. (Burkhardt).

FRUIT INSECTS

APPLE APHID (*Aphis pomi*) - MASSACHUSETTS - Increasing rapidly on apples. (Wheeler, June 20). MICHIGAN - Becoming noticeable especially on water shoots at Coloma, South Haven and Grand Rapids. (Hutson, June 10). INDIANA - Continue abundant on apples in Vincennes area. (Hamilton). NEVADA - Moderate to heavy populations on apple in Reno-Sparks area, Washoe County. (Gallaway, Ting, June 20). VIRGINIA - Prevalent in northern area apple orchards; about normal for time of year. (Hill).

APHIDS - UTAH - *Monellia costalis* and *M. caryae* damaging pecan foliage in area of Washington County and *Chromaphis juglandicola* serve on walnut foliage at Moab, Grand County. (Knowlton). IDAHO - *Myzus cerasi* common on cherry trees in Bingham County. (Bishop). VIRGINIA - Quite heavy populations of *Anuraphis roseus* were present earlier in northern area apple orchards. More than usual control required. (Hill).

WHITE APPLE LEAFHOPPER (*Typhlocyba pomaria*) - MASSACHUSETTS - More numerous than usual in orchards. (Wheeler, June 20).

CODLING MOTH (*Carpocapsa pomonella*) - NEW MEXICO - High percentage of "wormy" apples in untreated orchards in Bernalillo, Sandoval, Rio Arriba, Taos, De Baca, Lincoln and Otero Counties. (N. M. Coop. Rpt.). WISCONSIN - Infestation light to medium in Door County orchards. (Wis. Coop. Sur.).

RED-BANDED LEAF ROLLER (*Argyrotaenia velutinana*) - WISCONSIN - Populations range from light to medium in Door County orchards. (Wis. Coop. Sur.).

EYE-SPOTTED BUD MOTH (*Spilonota ocellana*) - WISCONSIN - Medium to heavy infestations of 4-5 instar larvae in Door County orchards. (Wis. Coop. Sur.).

FRUIT TREE LEAF ROLLER (*Archips argyrospila*) - NEW MEXICO - Caused extensive damage to apple foliage near Taos, Taos County. Most caterpillars now pupated and heavily parasitized. (N. M. Coop. Rpt.). WISCONSIN - Populations light to medium in Door County orchards. (Wis. Coop. Sur.).

ORANGE TORTRIX (*Argyrotaenia citrana*) - OREGON - Infestations causing some loss to untreated boysenberries and raspberries. (Rosenstiel). CALIFORNIA - Light on apples in Watsonville area of Santa Cruz County. (Cal. Coop. Rpt.).

SHOT-HOLE BORER (*Scolytus rugulosus*) - NEW MEXICO - Killing cherry and peach trees at Tesuque, Santa Fe County. (N. M. Coop. Rpt.).

EUROPEAN FRUIT LECANIUM (*Lecanium corni*) - OHIO - Eggs hatching in Clyde area about June 16; crawling stages abundant. (Rings).

ORIENTAL FRUIT MOTH (*Grapholitha molesta*) - ILLINOIS - Infestations generally light in Carbondale area. (Meyer). INDIANA - Second-brood injury light in Vincennes area. (Hamilton). CALIFORNIA - Heavy infestation damaging young nectarine trees in Visalia area of Tulare County. (Cal. Coop. Rpt.).

PLUM CURCULIO (*Conotrachelus nenuphar*) - GEORGIA - Second-generation eggs being deposited on peaches at Fort Valley June 19. (Snapp). NORTH CAROLINA - Very abundant in peaches in Sandhills area. Summer generation now emerging. (Smith).

ORCHARD MITES - SOUTH CAROLINA - Very serious some orchards in Oconee County. (Nettles et al.). OHIO - Infestations of *Tetranychus telarius* increasing in Wooster area. Counts up to 12 per leaf on peaches where control not applied. (Rings). Populations of *Panonychus ulmi* generally light. (Cutright, Rings).

VIRGINIA - Populations generally low in northern area orchards. (Hill).
 NEW MEXICO - Light to moderate infestations of Bryobia praetiosa complex to apples, causing some damage to foliage. (N. M. Coop. Rpt.). MARYLAND - P. ulmi heavy on prune trees at Ringgold. (U. Md., Ent. Dept.).

CATFACING INSECTS - COLORADO - Lygus elisus and L. hesperus of concern on peaches in Palisade area of Mesa County. (Exp. Sta.).

CICADAS - NEVADA - Damaging fruit trees in Elko, Lamoille and Deeth areas, Elko County. (Bechtel, Lauderdale, Menke, June 20).

PEAR-SLUG (Caliroa cerasi) - TENNESSEE - Damaging cherry and pear nursery stock, Roane County. (Bennett).

FILBERTWORM (Melissopus latiferreanus) - OREGON - Emerged in Benton County on June 25, 8 days earlier than it has in past 11 years. (Ainscough).

BLACK-HEADED FIREWORM (Rhopobota naevana) - OREGON - Prevalent some cranberry bogs in Brandon area. (Rosenstiel, June 21).

WALNUT CATERPILLAR (Datana integerrima) - OKLAHOMA - Damaging pecans some areas. (Coppock, Bower).

A TWIG BORER (Melalgus confertum) - CALIFORNIA - Medium infestation of olive trees at Loomis, Placer County. (Cal. Coop. Rpt.).

PECAN NUT CASEBEARER (Acrobasis caryae) - OKLAHOMA - Two hundred pecan clusters examined in orchard in Tulsa County; 19 percent with one or more nuts destroyed by first generation larvae. Pupation almost complete. (Coppock).

FALL WEBWORM (Hyphantria cunea) - LOUISIANA - Considerable numbers on pecans and other trees generally. (Spink).

MEXICAN FRUIT FLY (Anastrepha ludens) - CALIFORNIA - Trapping continued during May with negative results. (PPC, West. Reg.).

Citrus Insect Situation, Third Week of June, Lake Alfred, Florida - PURPLE SCALE activity increased and further increase is expected, with peak coming after middle of July. FLORIDA RED SCALE declined sharply, but an increasing trend will begin in a week or two, with the beginning of a new hatch. CITRUS RED MITE activity increased further and is now at a peak. Infestations will decline rapidly with rain. CITRUS RUST MITE activity was unchanged on leaves, but increased on fruit. An increasing trend is expected, assuming that weather will be a little wetter. (Pratt, Thompson, Johnson, June 19).

TRUCK CROP INSECTS

POTATO APHIDS - NEW JERSEY - Myzus persicae and Macrosiphum solanifolii becoming numerous in sprayed potato fields in central area; up to 50 per sweep. (Ins. Dis. News1.). DELAWARE - M. solanifolii decreased generally on most potatoes and tomatoes throughout State. (Conrad). MAINE - In cages on primary hosts at Presque Isle, spring migrants of M. solanifolii began to mature June 9, Myzus solani by or before June 9, and M. persicae and Aphis abbreviata about June 12. This was about usual time for first 2 species, but about week late for A. abbreviata. Field examination of colonies of aphids collected from Canada June 12-14 indicate that M. persicae spring migrants may be somewhat more general and abundant than usual in central and southern Aroostook County.

Aphid populations on potatoes very light now. (Shands). MARYLAND - Moderate to heavy numbers of M. solanifolii on tomatoes at various locations on Eastern Shore. Parasitism evident. (U. Md., Ent. Dept.). PENNSYLVANIA - M. solanifolii present but not increasing on potatoes and tomatoes in south-eastern area. (Menusan). NORTH DAKOTA - Populations of M. persicae increasing on potatoes in southeastern area. (N. D. Ins. Rpt.).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - IDAHO - Spotted but general in eastern and south central areas. More abundant than past years. Hatching well underway in Jerome and Gooding vicinities. (Gittins). Young larvae present most fields examined in southeastern area. (Bishop). DELAWARE - Defoliated about 50 percent of tomatoes one field in Kent County. Larvae feeding despite treatments in parts of Kent and Sussex County. (Conrad). MARYLAND - Larvae destructive to potatoes at Frederick. (U. Md., Ent. Dept.).

FLEA BEETLES - IDAHO - Above normal numbers of Phyllotreta pusilla for time of year in potatoes and beets in eastern area. (Gittins). Epitrix subcrinita appearing on potato fields in southeastern area. Some foliage injury is appearing in fields in Custer County, counts up to 20 per plant. (Bishop). MAINE - Populations of overwintered Epitrix cucumeris on potatoes in Presque Isle unusually low. No larger populations reported in northeastern area. (Shands). NEW MEXICO - Damaging vegetables in Taos County; light infestations in San Miguel and Torrance Counties. (N. M. Coop. Rpt.). MARYLAND - Moderate numbers of E. cucumeris on potatoes at Frederick and Phyllotreta striolata destructive to cabbage at Braddock Heights. (U. Md., Ent. Dept.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - VIRGINIA - Damage to potatoes quite heavy some fields in eastern areas (Holmaster) and damaging plants in Caroline County (Rowell, Eager).

POTATO LEAFHOPPER (Empoasca fabae) - WEST VIRGINIA - Increasing slowly on potatoes statewide. (W. Va. Ins. Sur.).

HORNWORMS (Protoparce spp.) - COLORADO - Egg and larval counts on tomatoes were 3 and 4 respectively per 100 leaves in Bent, Otero, Crowley and Pueblo Counties. (Exp. Sta.). NEW MEXICO - Generally heavy on tomatoes in Luna County averaging 1 larva per 4 plants. Considerable damage in Bernalillo and Rio Arriba Counties. (N. M. Coop. Rpt.). KANSAS - Eggs found on tomato plants in Finney County area June 21. (Matthew).

BEET ARMYWORM (Laphygma exigua) - CALIFORNIA - Infestations heavy on tomatoes in Solano County, sugar beets in Santa Cruz County and beans in San Luis Obispo County. Light damage to strawberries in Santa Cruz County. (Cal. Coop. Rpt.).

POTATO PSYLLID (Paratrioza cockerelli) - KANSAS - Adults appearing on potatoes and tomatoes in Haskell and Finney Counties. Counts average 4-6 per 100 sweeps. (DePew, Marvin).

Potato Psyllid Survey - Fourth survey made during period June 16-25. Populations remained low over entire area surveyed with little change from previous reports. Scottsbluff, Nebraska, area averaged 13.3 per 100 sweeps on Lycium. Green River, Wyoming averaged 0.6, and in Laramie area average was 3.8. Greeley, Colorado, area showed greatest increase over previous survey with 48 psyllids per 100 sweeps at Pueblo; La Junta area averaged 6, Salida 7. Populations west of mountains remained low; Grand Junction, Colorado, area averaged 1 and Provo and Logan, Utah, areas averaged 1.38. (PPC, States Coop.).

GOLDEN NEMATODE (*Heterodera rostochiensis*) - OREGON - Survey completed except that to be done in Willamette Valley in mid-summer. Area completed covered Klamath Falls area, central area of Jefferson, Deschutes, and Crook Counties, and northeastern Malheur, Baker and Umatilla Counties. CALIFORNIA - Processing of soil samples collected in State near completion. Only those collected in Kern County remain to be examined. No golden nematode found in either Oregon or California. (PPC, West. Reg., May Rpt.).

STINK BUGS - TEXAS - Medium infestations of adults on tomatoes in Van Zandt County. (Davis).

A THRIPS (*Frankliniella occidentalis*) - CALIFORNIA - A rather high incident of spotted wilt of tomatoes reported in Oceanside area of San Diego County. (Cal. Coop. Rpt.).

BLISTER BEETLES - TEXAS - Heavy infestations on tomatoes in Van Zandt County. (Davis).

STRIPED CUCUMBER BEETLES (*Acalymma vittata*) - MASSACHUSETTS - More abundant than usual. (Wheeler). DELAWARE - Fairly common on cucumbers throughout State. (Conrad). NEW MEXICO - Moderate damage to pinto beans near Moriarty. Damaging cantaloups and cucumbers in Espanola Valley. (N. M. Coop. Rpt.). INDIANA - Increasingly abundant, causing damage to squash and cucumbers in Lafayette area. (Gould). PENNSYLVANIA - Becoming a problem on cucurbits in southeastern area. (Menusan).

SQUASH BUG (*Anasa tristis*) - OKLAHOMA - Becoming numerous in gardens throughout State. (Bower). DELAWARE - Adults present on cucurbits in southwestern Sussex County. (Conrad). NEW MEXICO - Damaging cucurbits in Valencia County and heavy infestations on vegetables in Torrance County. (N. M. Coop. Rpt.).

CABBAGE MAGGOT (*Hylemya cilicrura*) - MASSACHUSETTS - Second-brood may be more serious than usual on late cole crops. (Crop Pest Cont. Mess.).

CABBAGE LOOPER (*Trichoplusia ni*) - CALIFORNIA - Heavy infestations of cabbage in Fresno area. (Cal. Coop. Rpt.). NEW MEXICO - Heavy infestations doing considerable damage to cabbage near Deming. (N. M. Coop. Rpt.).

DIAMONDBACK MOTH (*Plutella maculipennis*) - VIRGINIA - Increasing on crucifers in eastern area. (Hofmaster). NORTH DAKOTA - Larvae numerous on wild mustard in Cass County. (N. D. Ins. Rpt.).

IMPORTED CABBAGEWORM (*Pieris rapae*) - UTAH - Causing moderate damage to cabbage several localities. (Knowlton). DELAWARE - Remains common in several areas. (Conrad). CALIFORNIA - Heavy infestations on cabbage in Fresno area. (Cal. Coop. Rpt.). VIRGINIA - Increasing on crucifers in eastern area. (Hofmaster). MARYLAND - Generally destructive to cabbage in central area and on Eastern Shore. Adults abundant in fields. (U. Md., Ent. Dept.).

PEA APHID (*Macrosiphum pisi*) - IDAHO - Populations building up generally in Latah County area. Control being applied many fields. (Smith, Manis). MINNESOTA - Counts remain high on peas in south central, southwestern and west central districts. (Minn. Ins. Rpt.). WISCONSIN - Counts range 15-200 per sweep, averaging 50, in peas in Brown County. Counts similar in Calumet, Kewaunee, Manitowoc and Outagamie Counties. (Wis. Coop. Sur.).

MEXICAN BEAN BEETLE (*Epilachna varivestis*) - SOUTH CAROLINA - Much more abundant than usual on beans in Pee Dee area. (Nettles et al.). UTAH - Damage increasing in several northern and central counties. (Knowlton). DELAWARE - Adults common on beans in Sussex County, causing moderate damage several locations. (Conrad). NEW MEXICO - Doing extensive damage to pinto beans some areas. (N. M. Coop. Rpt.).

CORN EARWORM (Heliothis zea) - NORTH CAROLINA - Causing considerable damage to beans. (Overman, Neunzig)

SOUTHERN GREEN STINK BUG (Nezara viridula) - ALABAMA - Infestations heavy on beans in Baldwin County. (S. Hays).

SPINACH LEAF MINER (Pegomya hyoscyami) - IDAHO - Abundant all sugar beet fields from Twin Falls eastward. Egg clusters, less than 50 percent viable, average 3 per leaf near Idaho Falls. Damage to lower leaves in Idaho Falls, Blackfoot and Rupert areas rather extensive. Later growth in Magic Valley area untouched. (Gittins).

SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons) - MASSACHUSETTS - Heavy on lettuce. (Wheeler, June 20). NORTH DAKOTA - Migration to potatoes observed near Englevale, Ransom County, 10 per 50 sweeps. (N. D. Ins. Rpt.).

PEPPER WEEVIL (Anthonomus eugenii) - CALIFORNIA - Light infestation of bell peppers at Spring Valley, San Diego County. (Cal. Coop. Rpt.).

GREEN PEACH APHID (Myzus persicae) - UTAH - Damage sugar beets in areas of Washington County. (Knowlton).

BEET WEBWORM (Loxostege sticticalis) - IDAHO - Generally present from Preston north to Rigby and west to Twin Falls. Heavy infestations in Preston and Bancroft areas. Larvae, all instars, present. Adults predominate from Pocatello to Rigby. Infestations not found west of Jerome. (Gittins). Light infestations on lambsquarters near potatoes and beets in Bingham and Bonneville Counties. (Bishop). COLORADO - Egg counts, 1-10 per lettuce plant in Alamosa County. None found in surveys in Bent, Otero, Crowley and Pueblo Counties. Trap catches high, counts on June 11 were 10,324 at Rocky Ford and 11,399 at Greeley. (Exp. Sta.).

BEET LEAFHOPPER (Circulifer tenellus) - UTAH - Damage increases daily. Spinach at Farmington 100 percent infested with curly top. Beans and tomatoes in Box Elder, Cache, Davis and Weber Counties up to 30-50 percent diseased many cases. Healthy tomatoes rare in some southern counties. (Dorst, Knowlton). IDAHO - Activity evident on tomato plants in Magic Valley area. (Gittins).

CUTWORMS - OREGON - Causing some economic injury to corn, beans, beets and mint in Willamette Valley. Infestations in many sections of area in State. Species predominantly Peridroma margaritosa. (Every). CALIFORNIA - Light infestations of Agrotis ypsilon on strawberries in Watsonville area of Santa Cruz County. (Cal. Coop. Rpt.). VIRGINIA - Damage to sweetpotatoes fairly heavy some eastern areas. (Hofmaster). NEW MEXICO - Damaging vegetable crops in Espanola Valley. (N. M. Coop. Rpt.).

ALFALFA LOOPER (Autographa californica) - OREGON - Causing some localized injury to mint in Linn, Marion and Benton Counties. (Every).

ASPARAGUS BEETLES (Crioceris spp.) - IDAHO - Abundant in Twin Falls area. (Gittins). DELAWARE - C. asparagi unusually abundant in Kent County. (Conrad).

ONION MAGGOT (Hylemya antiqua) - IDAHO - Damage to onions much reduced from last year in southwestern area. Peak overwintered populations past, first summer generation appearing. (Scott). UTAH - Damaging some fields in Weber, Salt Lake, Box Elder and other counties. (Knowlton). ILLINOIS - Damage severe few onion fields in northern area. (Ill. Ins. Rpt.).

CYCLAMEN MITE (*Steneotarsonemus pallidus*) - MASSACHUSETTS - Infestations in strawberries more numerous and destructive than at any time in past 10 years. (Wheeler, June 20). WISCONSIN - Adult and eggs light in Door County on strawberries. (Wis. Coop. Sur.).

TOBACCO INSECTS

GREEN PEACH APHID (*Myzus persicae*) - NORTH CAROLINA - Occasionally found on tobacco. (Chamberlin).

TOBACCO BUDWORM (*Heliothis virescens*) - GEORGIA - Infestations light to heavy on aromatic tobacco in Elbert County. (Johnson).

WIREWORMS - VIRGINIA - Severely damaged newly set tobacco plants in a Bland County field. (Mallory).

COTTON INSECTS

APHIDS - GEORGIA - Light infestations of *Aphis gossypii* in Candler, Laurens and Jefferson Counties. (Jackson). ARKANSAS - Increasing generally. (Ark. Ins. Rpt.). ALABAMA - *A. gossypii* beginning to appear in fields previously treated for bollworm control. Few observed in untreated fields in Chilton County. (Grimes). TENNESSEE - Widespread and in some cases heavy in cotton fields in western area. (Mullett). MISSOURI - Light to heavy populations. Lady beetles and predators very numerous. (Kyd, Thomas).

BOLLWORMS (*Heliothis* spp. et al.) - GEORGIA - Counts made in 51 fields in northern and southern areas. Eggs averaged 18 per 100 terminals and larvae averaged 2.8 per 100 terminals. Fifty of fifty-one fields infested with eggs and/or larvae. (Johnson). OKLAHOMA - Populations light in southwest. (Hatfield). ARKANSAS - Activity declined on cotton. Percentage of fields infested was 27 compared with 37 for previous week. (Ark. Ins. Rpt.). ALABAMA - Continue to be problem most fields in State. Infestations medium to heavy. Eggs, larvae and damaged terminals ranged 30-70 per 100 terminals. (Grimes). CALIFORNIA - Light infestations of *H. zea* in Calexico area of Imperial County. (Cal. Coop. Rpt.). NORTH CAROLINA - Less abundant than previous week. Some fields need treatment. (Cott. News Lett.). SOUTH CAROLINA - Buildup rapid in Florence area. First and second instars numerous. (Fye et al.). TENNESSEE - Populations general in western area. Causing considerable damage to older cotton; counts from 0-19 larvae per 100 terminals. (Locke). MISSOURI - Infestations light; counts 1-6 eggs and 1-3 larvae per 100 terminals in 5 percent of fields inspected. (Kyd, Thomas). MISSISSIPPI - Between broods generally in delta counties. Fewer eggs and larvae in fields than for past 3 weeks. (Merkl et al.). LOUISIANA - Average square infestation in Madison Parish 4 percent. (Smith et al.). TEXAS - Infestations averaged 4.4 eggs and 1.9 larvae per 100 terminals in McLennan and Falls Counties. Square injury averaged 1.4 percent. Egg deposition is not heavy. (Parenchia et al.). NEW MEXICO - *Heliothis zea* infestations generally light and spotty in cotton growing areas. (N. M. Coop. Rpt.). ARIZONA - Damaged squares numerous in fields near Peoria. Only few light infestations elsewhere. (Bottger, Kauffman, Sheets).

BOLL WEEVIL (*Anthonomus grandis*) - GEORGIA - Square counts made in 31 of 51 fields examined in northern and southern counties ranged from 0-18 percent, averaging 7.6 percent. (Johnson). ARKANSAS - Emergence is light in all areas except in southwest. No square counts higher than 15 percent infested squares found. (Ark. Ins. Rpt.). ALABAMA - Average infestation in central area was

3.7 percent. (Grimes). LOUISIANA - Light to moderate infestations in Concordia, Richland, West Carroll and St. Landry Parishes. (Spink). Average square infestation 26 percent in Madison Parish. Weevil emergence about complete. First-brood weevils hatched June 21. Square infestations climbing rapidly. (Smith et al.). NORTH CAROLINA - Infestation generally light. (Cott. News Lett.). SOUTH CAROLINA - Infestations variable in Florence area. First generation adults rare. (Fye et al.). TENNESSEE - Infestations confined to southern counties in western area. Conditions favorable for buildup. (Locke). MISSOURI - None found. (Kyd, Thomas). MISSISSIPPI - Percent of infestations remains exceptionally low ranging from 0-3 in delta counties. (Merkl et al.). TEXAS - Infestation averaged 47.6 percent in untreated fields in McLennan and Falls Counties compared with 9.6 percent in treated fields. First-generation adults active in early-planted fields. No emergence in hibernation cages. (Parencia et al.).

CABBAGE LOOPER (*Trichoplusia ni*) - ARIZONA - Light infestations, 2-4 early-instar larvae per 100 sweeps most fields. (Bottger, Kauffman, Sheets).

FLEAHOPPERS - OKLAHOMA - Building up considerably in Jackson and Tillman Counties. (Hatfield). SOUTH CAROLINA - Blasting young squares in nearly all Piedmont counties. (Cott. Lett.). TENNESSEE - Causing some damage in western area, control needed many fields. (Locke). MISSOURI - Counts ranged 1-5 adults and nymphs per 100 terminals. (Kyd, Thomas). MISSISSIPPI - Common in untreated fields. (Merkl et al.). TEXAS - Infestations by *Psallus seriatus* continued at injurious levels many fields where control delayed in McLennan and Falls Counties. Average infestation 41.5 per 100 terminals in untreated fields and 25 per 100 terminals in treated fields. Infestations at injurious levels in 28 of 69 fields examined. (Parencia et al.). NEW MEXICO - Heavy infestations in Lea, Chaves, Eddy and Roosevelt Counties. Light to moderate in Dona Ana, Hidalgo, and Luna Counties. (N. M. Coop. Rpt.).

LEAFHOPPERS - CALIFORNIA - *Empoasca* spp. building up some cotton fields, Imperial County. Treatment required. (Peterson Jr.).

LYGUS BUGS - NEVADA - Populations increasing in fields, particularly alfalfa, adjacent to cotton in Pahrump Valley, Nye County. (Zoller, June 20). ALABAMA - Moderate infestations of *Lygus lineolaris* on cotton in central area. (McQueen, Grimes). CALIFORNIA - Heavy populations in Imperial County. (Cal. Coop. Rpt.). MISSISSIPPI - General infestation of *L. lineolaris* over delta counties, ranging from light to heavy. In majority of fields examined, this insect was doing more damage than all other cotton pests combined. (Merkl et al.). LOUISIANA - Adults numerous in fruiting cotton in Madison Parish that has been untreated for week or more. Some square damage being caused by adults. (Smith et al.). NEW MEXICO - Generally heavy infestations in Dona Ana, Luna and Chaves Counties. Light to medium and spotty in Eddy and Lea Counties. (N. M. Coop. Rpt.). ARIZONA - Slight increases in adults, 2-8 per 100 sweeps. (Bottger, Kauffman, Sheets).

PINK BOLLWORM (*Pectinophora gossypiella*) - TEXAS - Infestation in blooms averaged 3.8 percent in McLennan County, 2.2 percent in Falls County and 2.5 percent in one field in Milam County. (Parencia et al.).

SPIDER MITES - NEVADA - Populations increasing several fields; two fields treated. (Zoller, June 20). ALABAMA - Continue to spread in northern and central areas. (Rawson, Grimes). MISSOURI - Marginal infestations found some fields. (Kyd, Thomas). MISSISSIPPI - Light to heavy localized infestations some fields in delta counties. (Merkl et al.). NEW MEXICO - Heavy but spotty infestations of *Tetranychus desertorum* in Chaves County. (N. M. Coop. Rpt.).

STALK BORER (Papaipema nebris) - OKLAHOMA - Causing considerable damage to cotton in Caddo County. (Fenton). MISSISSIPPI - Burrows in cotton stalks at Byhalia. (Hutchins). TENNESSEE - Found in larger numbers below Jackson than any previous year, but damage is slight. (Locke).

STINK BUGS - CALIFORNIA - Euschistus conspersus light in stub cotton fields in Imperial County. (Cal. Coop. Rpt.). ARIZONA - Very light populations. (Bottger, Sheets, Kauffman).

THRIPS - OKLAHOMA - Building up considerably in Jackson and Tillman Counties. (Hatfield). LOUISIANA - Counts average 3.22 per plant in untreated fields in Madison Parish compared with 1.41 in treated fields. Infestations generally much less following rains. Heaviest damage in seedling cotton. (Smith et al.).

WHITEFLIES - CALIFORNIA - Populations building up rapidly on cotton in Imperial County. (Cal. Coop. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

EUROPEAN ELM SCALE (Gossyparia spuria) - IDAHO - Continued severe infestations on elms at Preston. (Gittins). KANSAS - Large numbers of crawlers in Ellis and Barton Counties, central area. (Thompson).

ROSE CHAFER (Macrodactylus subspinosus) - WISCONSIN - Adults numerous in central and southwestern counties. (Wis. Coop. Sur.).

SARATOGA SPITTLEBUG (Aphrophora saratogensis) - WISCONSIN - Heavy infestation in Lincoln County. (Wis. Coop. Sur.).

INTRODUCED PINE SAWFLY (Diprion similis) - WISCONSIN - Heavy parasitism in southern Burnett and Polk Counties. (Wis. Coop. Sur.).

FOREST TENT CATERPILLAR (Malacosoma disstria) - WISCONSIN - Development has been generally slow. Complete defoliation in scattered areas. (Wis. Coop. Sur.).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - WISCONSIN - To June 25, Dutch elm disease had been found in 122 trees in 20 municipalities of 7 counties. (Wis. Coop. Sur.).

SOUTHERN PINE BEETLE (Dentroctonus frontalis) - NORTH CAROLINA - Over 30 scattered, spotty areas of a few trees to one-fourth acre infested in eastern Tyrrell County. (Green).

Gypsy Moth Survey in Pennsylvania - Placement of approximately 13,300 traps in eastern area commenced during the third and fourth weeks of June. Parts or all of the following 23 counties will be surveyed on a 1-mile grid pattern: Bradford, Susquehanna, Wayne, Pike, Lackawanna, Wyoming, Sullivan, Lycoming, Northumberland, Montour, Columbia, Luzerne, Monroe, Carbon, Schuylkill, Dauphin, Lebanon, Berks, Lehigh, Northampton, Bucks, Montgomery and Philadelphia. The area to be surveyed covers 11,655 square miles. (Nichols).

Gypsy Moth Situation Relating to Civil Action on Spraying in Long Island - During the summer of 1957, 14 individuals, all residents of Long Island, New York, sought an injunction to prevent spraying of their properties in connection with the gypsy moth eradication program. In their complaint the plaintiffs claimed the following: "DDT is, and is recognized and admitted by the defendants to be, a delayed-action, cumulative poison such as will

inevitably cause irreparable injury and death to all living things, including human beings, animals, birds, insects, and the predation and parasites of harmful insects if ingested, inhaled, or brought into contact therewith in sufficient quantities or over a sufficient period . . . Wherefore, plaintiffs demand judgement forever restraining the defendants and their agents from such threatened spraying upon the lands, homes, and persons of the plaintiffs or so near as to endanger the same, and for temporary restraint and for such damages as plaintiffs shall cause thereby if defendants shall not have refrained therefrom." This action was brought against the Secretary of Agriculture, Commissioner of Agriculture and Markets of the State of New York, and the Assistant Area Supervisor of the Plant Pest Control Division stationed on Long Island. After a hearing on May 15, 1957, the U. S. District Judge denied the plaintiffs' request for a temporary injunction and the case was brought to trial at Brooklyn, New York, beginning on February 10, 1958, before the Honorable Walter Bruchhausen. Testimony was completed on March 4, 1958, and the decision was rendered June 23, 1958, in which Judge Bruchhausen ruled out all claims of the plaintiffs and in favor of the defendants. In the decision he said, "I hold that the mass spraying has a reasonable relation to the public objective of combating the evil of gypsy moth and is within the proper exercise of police powers by the designated officials." (PPC)

JAPANESE BEETLE (Popillia japonica) - DELAWARE - Very common on new shoots of loblolly and scrub pines, and chokecherries one location Kent County. (Conrad). VIRGINIA - Troublesome on ornamentals in Lunenburg County. (Powers). Emerging Clarke County, June 25. (Porterfield, Edwards). MARYLAND - Adults increasing on ornamentals in southern sections. Beetles later than usual. (U. Md., Ent. Dept.).

AN ANT (Prenolepis imparis) - VIRGINIA - Caused severe, primary damage to rose buds locally in Fairfax County. Damage to plants by this species rarely reported. Determined M. R. Smith. (Gentry).

MOURNING-CLOAK BUTTERFLY (Nymphalis antiopa) - NEW MEXICO - Stripping many elm trees in San Miguel and Torrance Counties. (N. M. Coop. Rpt.).

WESTERN PINE BEETLE (Dendroctonus brevicomis) - IDAHO - Becoming increasingly abundant on ponderosa pine in Camp Creek area of Valley County. (Furniss).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - PENNSYLVANIA - Heavy egg laying in southwest area may mean trouble next year. (Udine).

OBLIQUE-BANDED LEAF ROLLER (Archips rosaceana) - NEW MEXICO - Defoliating box elder in Santa Fe County. (N. M. Coop. Rpt.).

BAGWORM (Thyridopteryx ephemeraeformis) - DELAWARE - Young larvae common on mimosa and locust some locations; quite heavy on red cedar in western Kent County. (Conrad). ILLINOIS - Fairly abundant in many parts of State. (Ill. Ins. Rpt.).

COTTONY MAPLE SCALE (Pulvinaria innumerabilis) - NEVADA - Moderate to heavy on locust and hawthorn in Reno-Sparks area, Washoe County. (Gallaway, June 20).

DOUGLAS-FIR BEETLE (Dendroctonus pseudotsugae) - IDAHO - Appears to be causing several times more damage to Douglasfir than past two years in drainages of north fork of Payette River and south fork of Salmon River. (Furniss).

ELM LEAF BEETLE (Galerucella xanthomelaena) - IDAHO - Very numerous in Canyon County; most untreated elms defoliated. Now pupating. (Scott).

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana) - MICHIGAN - Full flight as far north as the Muskegon-Bay City line. (Hutson, June 20).

A LEAF ROLLER - OKLAHOMA - Forty-four percent of red bud leaves damaged in Payne County. (Walton).

MIMOSA WEBWORM (*Homadaula albizziae*) - DELAWARE - Light feeding on mimosa trees in southern Sussex County. (Conrad).

A NOCTUID (*Melipotis acontoides*) - FLORIDA - Caused considerable damage to royal poinciana at Key West, Monroe County. One-third of 400 trees inspected completely defoliated. (Swanson, June 18).

SPRUCE SPIDER MITE (*Oligonychus ununguis*) - MASSACHUSETTS - Causing noticeable damage to coniferous ornamentals. (Wheeler, June 20).

RED-HEADED PINE SAWFLY (*Neodiprion lecontei*) - MICHIGAN - Adults emerging at insectary at East Lansing, June 20. (Hutson).

RED-HUMPED OAKWORM (*Symmerista albicosta*) - MICHIGAN - Adults, probably this species, numerous on oak foliage at several locations in Lake and Newaygo Counties. (Hutson, June 20).

A SAWFLY - IDAHO - Populations on ponderosa pine substantially more numerous than in recent years in Camp Creek area of Valley County. Damage negligible. (Furniss).

A THRIPS (*Frankliniella occidentalis*) - CALIFORNIA - Medium to heavy infestations on ornamentals in Oceanside area of San Diego County. (Cal. Coop. Rpt.).

ADDITIONAL NOTES

NEBRASKA - PEA APHID continued heavy in most alfalfa fields in northeast and south central sections with 46-860 per sweep. TARNISHED PLANT BUG high in northeast and south central regions, averaged 165 adults and nymphs per 100 sweeps. ARMYWORM caused heavy damage in winter wheat in south central, southeast and northeast regions, with counts of 7-46 per square foot. Migrations into sorghum and corn underway in many areas. Great numbers of parasites in many fields. (Andersen). GARDEN WEBWORM abundant in southeast portion of State especially in weedy corn fields. Controls are being applied. (Roselle). WIREWORMS caused considerable damage to corn grown in heavier northeast soils, with 40 percent of stand destroyed in one Burt County field. STALK BORER light in northeast and southeast regions. Damage along margins of corn fields light. (Andersen). EUROPEAN CORN BORER populations high in northeast, southeast and south central portions of State. In 30-40 inch corn, present infestation is 88-100 in northeast, 75-100 in south central areas, and generally 0-40 percent in corn smaller than 30 inches. (Roselle, Andersen).

INSECTS AFFECTING MAN AND ANIMALS

CATTLE GRUBS (Hypoderma spp.) - IDAHO - Adults of H. lineatum appear to be very common in eastern area. (Gittins).

GERMAN COCKROACH (Blattella germanica) - OKLAHOMA - Common many homes in Tulsa area; unusually heavy in few premises. (Price).

HORN FLY (Siphona irritans) - SOUTH CAROLINA - Extremely numerous in Greenville County. (Nettles et al.) OKLAHOMA - Numbers considerably less than in recent weeks in central counties; populations average 200 on cows and 800 on bulls. (Howell). Populations on cows 200-400 per animal in Osage County. (Coppock). UTAH - Increasing on cattle in several counties. (Knowlton).

HOUSE FLY (Musca domestica) - SOUTH CAROLINA - About normal. (Nettles et al.). OKLAHOMA - Populations down from previous weeks in central area. (Howell).

HUMAN FLEA (Pulex irritans) - CALIFORNIA - Light infestation on dog at La Grange, Stanislaus County. (Cal. Coop. Rpt.).

LOUSE FLIES (Lipoptena depressa, L. cervi) - CALIFORNIA - Heavy infestations in deer in Railroad Flat area of Calaveras County. (Cal. Coop. Rpt.).

STABLE FLIES - OKLAHOMA - Increasing in north central area; averaging 20-30 per untreated animal. (Howell).

TABANIDS - SOUTH CAROLINA - Deer flies numerous in several locations, Newberry County. (Nettles et al.). NEVADA - Large numbers of adult Hybomitra sp. biting and annoying people and livestock in areas near rivers and streams, Elko County. (Bechtel, Lauderdale, June 20). IDAHO - Deer flies abundant near Blackfoot, Bingham County. (Gittins). ALABAMA - Horse flies reported in C.E.I.R. 8(26) : 569 as annoying cattle in the Tennessee Valley, identified as Tabanus sulcifrons. (K. Hays). UTAH - Annoying livestock in mountains near Mantua. (Knowlton).

TICKS - OKLAHOMA - Rhipicephalus sanguineus in many homes in Oklahoma City. (Rogers). Dermacentor variabilis and Amblyomma americanum numbers moderate in Stillwater area. Not as heavy as in past 2 years. (Howell).

CAT FLEA (Ctenocephalides felis) - OKLAHOMA - Heavy, 35-40 per square foot, in many homes and yards in Tulsa area. (Price). Moderate infestations on dogs in Stillwater area. (Howell). CALIFORNIA - Biting humans in Santa Clara County. (Cal. Coop. Rpt.).

MOSQUITOES - MASSACHUSETTS - Maximum hatch of Aedes spp. spring brood because of plentiful water supply. Culex pipiens, C. restuans and C. territans larvae in a few places. Culiseta melanura adults from overwintering larvae, no new larvae June 16. Few C. morsitans from spring brood. Control very noticeable as compared with non-control areas. (Wheeler, June 20). NEVADA - Large numbers in many areas of State. Mostly Aedes spp. Controls inaugurated in many areas near towns. (Nev. Coop. Rpt., June 20). UTAH - Very troublesome in Uintah, Cache, Rich, Box Elder, Piute and Sevier Counties. (Knowlton). NEW MEXICO - Annoying around homes in some areas. (N. M. Coop. Rpt.) NORTH DAKOTA - Temperatures retarding activity. (Noetzel). NORTH CAROLINA - Populations decreasing rapidly on the coast. (Ashton).

FLIES - ILLINOIS - Counts on dairy herd in Adams County showed 19 horn flies, 1.3 stable flies and 0.2 horse fly per animal. (Ill. Ins. Rpt.).

STORED-PRODUCT INSECTS

BOOKLOUSE (*Liposcelis divinatorius*) - CALIFORNIA - Heavily infesting cereal boxes in Salinas, Monterey County. (Cal. Coop. Rpt.).

KHAPRA BEETLE (*Trogoderma granarium*) - During May, 2 new infestations found at Yuma, ARIZONA, and one at Brawley, CALIFORNIA. Inspections in States of IDAHO, WASHINGTON, OREGON and NEW MEXICO were negative. (PPC, West. Reg.).

BENEFICIAL INSECTS

PREDATORS - ARIZONA - *Chrysopa* spp., *Hippodamia convergens* and nabids abundant in Maricopa and Pinal Counties. (Mendenhall, June 19). Collops and spiders abundant in all cotton fields examined. *Geocoris* and *Nabis* present most fields. (Bottger, Kauffman, Sheets). TEXAS - Lady beetles, lacewings and other predators light on alfalfa and grain sorghum. (Randolph). SOUTH DAKOTA - Lady beetles increasing in small grains and alfalfa; up to 11 larvae per 10 sweeps. (Hantsbarger).

A TENT CATERPILLAR PARASITE (*Sarcophaga aldrichi*) - WEST VIRGINIA - Extremely numerous statewide during June. (W. Va. Ins. Sur.).

A KLAMATHWEED BEETLE (*Chrysolina gemellata*) - COLORADO - To date, beetles have successfully eliminated Klamathweed in large area around site of original introductions. Populations presently averaging 2-10 per plant. (Exp. Sta.).

MISCELLANEOUS INSECTS

OLD HOUSE BORER (*Hylotrupes bajulus*) - FLORIDA - Very injurious to frame barracks-type building at Patrick Air Force Base, Brevard County. Det. H. J. Crawford. (Fla. Coop. Sur.).

FALSE CHINCH BUGS (*Nysius* spp.) - NEW MEXICO - Nuisance around homes throughout the State. (N. M. Coop. Rpt.).

EUROPEAN EARWIG (*Forficula auricularia*) - MASSACHUSETTS - Becoming nuisance throughout range which has increased greatly during last 10 years. (Wheeler, June 20). IDAHO - Abundant throughout State. (Gittins).

CORRECTIONS

CEIR 8(26) : 555 - SOUTHWESTERN CORN BORER - ARKANSAS - Should read, "First-generation larvae entering plants. (Barnes, Dowell)."

CEIR 8(24) : 525 - COOPERATIVE SURVEY ENTOMOLOGISTS - CALIFORNIA - Should read "1220 N Street, Sacramento 14."

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Protoparce sexta quinq.	Heliothis zea vires.
ALABAMA						
Crossville 6/26					1	23
ARKANSAS						
Fayetteville 6/12-18	5	28		8		22
Hope 6/12-18	15	5		1		20
Kelso 6/12-18	14	31		42		21
Morrilton 6/12-18	23	35				20
Stuttgart 6/12-18	3	20		25		16
FLORIDA						
Quincy 6/16, 24					14 1	7 9
ILLINOIS						
Urbana 6/20-26	790	10	5	154		2
INDIANA (Counties)						
Orange 6/18-20	158	11	5	30	14 16	1
Tippecanoe 6/20-23	194	6		64		
KANSAS						
Hays 6/6-16	411	78	13	118		20
Manhattan 6/17-25	4935	269	246	453		180
LOUISIANA						
Baton Rouge 6/20-26	7	8	443	3		18
Franklin 6/25	1	2	1	1		
MAINE						
Monmouth 6/21, 28	3					
Orono 6/28	2					
MARYLAND						
Fairfield 6/23-27	11	2		7	3	
MISSISSIPPI						
Grenada 6/16-21	6	6	1			2
Senatobia 6/13-20	4	10				5
State College 6/21-27	22	17	90	4		3 1
*Stoneville 6/20-26	30	65	83	5		11 1
NORTH CAROLINA						
Clayton 6/20-26	3	6	10		9	5
Faison 6/20-26		3	17			5
SOUTH CAROLINA						
Charleston 6/16-22	7	7	29	10		16 3
Clemson 6/21-27	24	19	54	1	16 1	120
Florence 6/22-28	358	153	227	110	6 5	1582 85
TENNESSEE (Counties)						
Blount 6/16-22	193	54	72	99	9 9	18
Cumberland	148	38	58	146	8 12	2
Greene	240	36	66	82	4 6	1
Madison	135	39	27	363	6 12	57
Robertson	214	80	36	104	8 10	4

*Four traps - Stoneville

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

TURNIP FLEA BEETLE (Phyllotreta nemorum (L.))

Economic Importance: Turnip flea beetle adults are serious pests of cruciferous crops in many areas of Europe, particularly on seedlings in the spring. Infestations often destroy the crop. In USSR from 1913 to 1915, 75 percent of the cabbage plants were destroyed in some areas. In addition to leaf feeding, the yellow mosaic virus of turnips has been transmitted by adults of Phyllotreta spp., including P. nemorum. Larval infestations of P. nemorum are also of importance in localized areas, but peak of feeding varies in Europe depending on climatic conditions. Both larvae and adults have been intercepted at U. S. ports of entry on several occasions from Europe. The beetle was introduced into New South Wales, Australia, prior to 1939, but as yet is not considered to be an important pest there.

Distribution: Occurs throughout most of Europe, Asiatic USSR (Western Siberia), Korea and Australia.

Hosts: Prefers crucifers generally, especially turnips in some areas, but has been recorded on peas, vetch, beets, soybeans, hops, flax, rhubarb and nasturtiums.



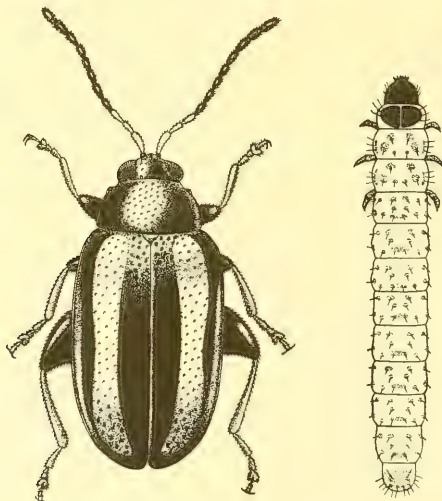
Damage to Radish Leaf



General Distribution of Turnip Flea Beetle

Life History and Habits: The overwintering adult emerges from winter quarters in early spring, usually about middle of April in England, and begin to deposit eggs singly, or in groups of 2-4 on the soil and sometimes on the epidermis of cruciferous hosts. The larvae hatch in 8 to 10 days and tunnel into the mesophyll tissue of the leaf. The mine is marked by a black excremental line. There may be as many as 107 larvae per leaf. The larvae mature on cabbage in 13 to 17 days and enter the soil to pupate. Pupation lasts for about 14 days. The life cycle requires 5 to 6 weeks. In England there is only one generation a year, but in USSR there may be from one to six, depending on the climate. In the fall, the adults enter hibernation in a variety of places such as under bark or dead leaves, in hedgerows, and often in farm buildings. Feeding in the early spring usually takes place on wild crucifers, and when the leaves of these hosts turn coarse, they turn to cultivated cruciferae. They return to the wild hosts in August after the cultivated hosts become coarse. The winter is passed in the vicinity of the wild hosts.

Description: Adult is oval, somewhat flattened. Length 2.5 to 3.5 mm. Antennae are long, dark, the first three joints paler, succeeding ones dark piceous. Thorax is broad, rounded, closely punctured. Elytra have two broad yellow bands which are slightly waved. Tibiae are reddish-yellow. The fourth and fifth antennal segments of the male are slightly or noticeably or perceptibly swollen. Eggs are yellow, rounded and finely pitted. The mature larva is about 6 mm. long, yellowish with series of blackish chitin plates. The pupae are at first yellow but change to black, just prior to emergence. The change beginning with a red tinge of the eyes on about the sixth day. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies.). CEIR 8(27) 7-4-58



Adult and Larva of Phyllotreta nemorum

Figures (except map): Adult and larva from Garcia-Tejero, F. D. 1946. Bol. de Patol. Vegetal y Ent. Agr. 15:353-368. Larval damage from Rostrup, S. and Thomsen, M. 1931. Die Tierischen Schädlinge des Ackerbaues. 367 pp. Berlin.



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Cooperative
ECONOMIC INSECT
REPORT

Issued by

PLANT PEST CONTROL DIVISION

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UNITED STATES DEPARTMENT OF AGRICULTURE

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PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GRASSHOPPERS moving into fields in north central Kansas counties. Mating in Oklahoma, heavy egg deposition expected. Heavy flights in eastern Colorado, egg laying expected soon. (p. 601). Cooperative control summary. (p. 602). EUROPEAN CORN BORER larvae averaged 7 per plant in central Iowa. (p. 602).

BEEET WEBWORM damaging in North Dakota. (p. 605). BLACK CUTWORM damaging in California and Oregon. (p. 605). LYGUS BUGS abundant in Idaho and numerous in New Mexico. Damaging in Arizona. (p. 606). SPOTTED ALFALFA APHID increasing in southern Arizona. (p. 607).

ROSY APPLE APHID more severe in Ohio than in past 10 years. (p. 609).

Worst outbreak of ALFALFA LOOPER in Washington since 1900. (p. 613). ONION MAGGOT more severe in Washington than in several years. Continues to be problem in Wisconsin. Damaging in New York. (p. 613).

SOUTHERN PINE BEETLE outbreak developing in southeastern Texas. (p. 617).

ADDITIONAL NOTES. (p. 608).

INSECTS not known to occur in the United States. (p. 621).

WEATHER OF THE WEEK ENDING JULY 7

Temperatures for the week averaged 6° to 9° below normal in the northwestern Great Plains and Great Basin of the Far West and within 3° of normal elsewhere. Rainfall west of the Continental Divide was heavy only in widely scattered spots, with little or none elsewhere. East of the Divide, weekly totals were extremely variable, ranging from none up to 13 inches. Showers occurred almost daily along the Canadian Border, and extended over the South and East during the weekend. Moderate to heavy weekly totals over the North Central Interior further improved moisture conditions, but soil moisture is still short in northwestern Montana and some other scattered local areas of the State, and more rain is needed in northwestern and north central North Dakota. Benefits of the generous rainfall in north central areas were offset in many local areas by storms and floods. The worst floods occurred in the western third and central portions of Iowa, where total rainfall ranged from 4 to 13 inches. Audubon measured 12.35 inches during a storm on July 2. Resulting floods along the Racoon, Nishnabotna, and Des Moines Rivers and many smaller streams took 19 lives and damaged crops and property to the extent of several million dollars. Up to 7 inches of rain on June 30 to July 1 in northern Wisconsin produced local flooding. Flooding also was reported in parts of Missouri, Oklahoma, and Kansas. In the latter State, rainfall at Winfield from July 4 through the 7th totaled 11.57 inches. In the Billings, Montana area, tornadoes, hail, and rain caused damage estimated at about \$5 million. In southeastern Wyoming, the hail center of America, hail damage was estimated in the millions. Wind and hail caused heavy damage in the Rapid City and Mobridge sections of South Dakota. Flash flooding near San Antonio, Texas on the 7th resulted from heavy rainfall which totaled 6.69 inches in that city for a 24-hour period on July 6-7, a new July record there. The week's rainfall generally was light south of the Ohio River and in the Carolinas and Virginia, and more rain now would be beneficial in Tennessee, Alabama, northern Georgia, and in about one-half the total area of the Carolinas. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE

GRASSHOPPERS - WISCONSIN - Third-instar nymphs very low in Buffalo and Trempealeau Counties. (Wis. Coop. Sur.). ILLINOIS - Nymphs averaged 16 per 100 sweeps in grass roadsides in central section, and 15 in eastern section. Hatching in western part of State, but not in damaging numbers. (Ill. Ins. Rpt.). IOWA - Ranged from newly hatched to full grown in southern and central areas. Populations low, 1-2 per square yard, no control appears necessary. (Iowa Ins. Inf.). MINNESOTA - Field counts generally low in all areas observed. Some increase in Melanoplus femur-rubrum hatch, particularly in alfalfa fields after hay removal. Averaged 15 per square yard, with marginal damage to soybeans in southern area. (Minn. Ins. Rpt.). NORTH DAKOTA - First instar to adult M. bivittatus and M. bilituratus present in western part of State. Control continued in many locations where still numerous. Nymphal survey in eastern area showed mostly non-economic infestations, although a few light to threatening infestations were observed and may require control in late crops. M. bivittatus and M. bilituratus mostly first to fifth instars, few adults present. M. femur-rubrum first to fourth instars becoming general in legumes. (N. D. Ins. Rpt.). SOUTH DAKOTA - Generally non-economic in south central and southeast regions except in Lyman, Union, Clay and Yankton Counties. South of Kennebec, Lyman County, spotted infestation averaged 25-30 nymphs per square yard in fields. Spotted in southern third of Clay and Yankton Counties. Spraying of heavy infestation in Union County continued. (King). Heavy in Bennett County with accompanying damage. Treatment underway. (Hantsbarger).

KANSAS - Continued to cause damage in north central counties, now moving into fields from roadsides, fence rows and weed patches. Border rows in corn fields and alfalfa fields showing feeding damage. Up to 40 per square yard in field margins in many localized areas. (Matthew). OKLAHOMA - Cooperative Federal-State control program in panhandle counties only partially complete due to inclement weather and high winds. Approximately 150,000 acres to be treated in Texas and Cimarron Counties and county-wide roadside program in Texas County. Roadside and marginal populations generally 20-30 per square yard, much higher in places. Aeoloplides turnbulli, Melanoplus bivittatus, M. packardi and M. bilituratus chief species, either fifth instar or adults. Mating, heavy egg deposition expected soon. Damage to sorghum and alfalfa margins and gardens generally heavy to severe in panhandle counties. Up to 50 per square yard in alfalfa fields and soil bank land. Range species commonly averaged 10-20 per square yard, with as many as 50 per square yard. Aulocara ellioti, M. packardi, Phibostroma quadrimaculatum and A. turnbulli most common species. Rangeland damage evident in many localities. Averaged 6-15 per square yard on range in northwestern and northern counties, situation not as serious as in panhandle counties. (Coppock).

TEXAS - Remain heavy to severe on roadsides and rangelands in panhandle counties. M. bilituratus collected in Sherman and Dallam Counties, M. bivittatus in Randall County, Mestobregma in Sherman County. Aulocara ellioti infestations in Moore, Dallam and Sherman Counties. Melanoplus spp. collected in Moore, Sherman, Dallam, Randall and Hartley Counties sent for determination. (Hawkins). Unknown species feeding on sorghum, Zavala County. (Harding). M. differentialis heavy, damaging Johnsongrass meadows and margins of cotton fields, Delta, Hunt and Rockwall Counties. (Davis). LOUISIANA - As many as 31 Neoconocephalus sp. per 100 sweeps on rice in Vermilion, Acadia and Jefferson Davis Parishes. (Spink). IDAHO - Camnula pellucida, predominantly third and fourth-instar nymphs, averaged up to 200 per square yard in small acreage of clover-grass mixture near Harvard, Latah County. (Portman). UTAH - Abundant in some orchards, gardens and alfalfa in Farmington-Kaysville area, Davis County, moderately serious in Enterprise-Beryl area, Washington and Iron Counties. (Knowlton). COLORADO - Heavy flights of M. bilituratus in eastern part of State. Females show advanced egg development. Egg laying expected within next 7 days. Migrating forms averaged 25-40 per square yard over much

of Morgan, Washington, Logan, Yuma, Sedgwick and Phillips Counties. Flight patterns depend on prevailing winds. Probability of second generation of *M. bilituratus* for 1958. (ARS, Ext. Serv., Exp. Sta.). NEVADA - Hatching in Panaca area, Lincoln County, and Fish Lake Valley, Esmeralda County. Scattered hatch between Hiko, Lincoln County, and Warm Spring, Nye County. (Lauderdale, June 27). ARIZONA - *Trimerotropis pallidipennis* adults numerous in Tuscon area. (Mendenhall, June 26). Control applied to 200 acres on 8 farms in Stanfield-Midway area. Many first instar *T. pallidipennis* present. (Miller).

Cooperative Control Summary: As of July 8, a total of 4,857,175 acres of roadsides, range and idle lands have been scheduled for grasshopper control in 55 counties in Colorado, Kansas, New Mexico, Oklahoma and Texas. Of this total, more than 2 million acres have been completed. This control program will provide protection to a vast acreage of cultivated crops. (PPC).

CRICKETS - OKLAHOMA - *Oecanthus* sp. common on alfalfa throughout State. (Coppock). WYOMING - *Anabrus simplex* abundant south of Casper, Natrona County, June 27. Moving east across rangeland. (Davison).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - NEW YORK - Damage observed on 2-10 percent of corn plants with tassels emerging, in Hudson Valley. Second-instar larvae prevailed. Egg laying will probably continue to mid-July and hatching to at least July 25. First egg masses in Niagara County averaged 2 per 100 plants. (N. Y. Wkly. Rpt., June 30). MARYLAND - First brood light in early sweet and field corn on Eastern Shore. One large sweet corn field showed 15 percent infestation. Pupation underway on lower shore. (U. Md., Ent. Dept.). VIRGINIA - Caused medium damage to corn in scattered areas of Carroll County. (Price). Caused 10 percent damage to 10-acre wheat field, Richmond County. (Farmer, Wilkins). NORTH CAROLINA - Severe in stalks and ears of sweet corn, Gates County. (Newsome, Farrier). WISCONSIN - Light on field corn, leaf feeding observed on about 4 percent of plants. Egg masses and first-instar larvae noted on 36-42 inch corn in Buffalo and Trempealeau Counties, June 26-27. No recent egg laying. (Wis. Coop. Sur.). MINNESOTA - Moth emergence 95-100 percent in all districts. Egg deposition increased, but counts still not high. Warm weather increased moth activity. Egg mass counts per 100 plants ranged 0-44 in southwest, 0-16 in south central, 0-4 in central and 0-8 in southeast districts. (Minn. Ins. Rpt.). ILLINOIS - Emergence almost complete throughout State. Tallest corn fields in eastern section averaged one percent infestation with 6 second-instar larvae per plant and 3.7 percent infestation with 2.2 larvae per plant in central section. Averaged 19 egg masses per 100 plants, 66 percent hatched, 16 percent infestation with 2.3 borers per plant in northern section. (Ill. Ins. Rpt.). OHIO - Emergence near 100 percent, egg deposition low except in isolated early fields. Crown feeding prominent in more advanced fields, first-generation infestation expected to be light. (Neiswander). IOWA - Moth activity high June 29, dropped off June 30. Six new egg masses per 100 plants on Boone County observation fields, few new egg masses on corn in Missouri River bottoms. Tall corn in west central area 65-96 percent infested, averaged 7 larvae per plant. (Iowa Ins. Inf.). ARKANSAS - Egg deposition on corn has begun in Phillips County. About 30 percent of larvae have pupated. (Ark. Ins. Rpt.). MISSOURI - Approximately 40 percent pupation, 10 percent emergence in southeast section. Remaining larvae mostly fifth instar. No new egg masses observed. (Jackson). Egg laying and hatch completed in central section. Averaged 3-16 larvae per stalk on 65-100 percent of untreated corn exceeding 45 inches in height. Larvae largely third to fifth instars. (Kyd, Thomas). SOUTH DAKOTA - Egg masses averaged 15 per 100 plants in north central region, 19 per 100 plants in east central region. No evidence of hatching. (Hantsbarger).

A CARABID (Agonoderus lecontei) - COLORADO - Damaged sorghum plantings in Kiowa County. (Ext. Serv.).

CHINCH BUG (Blissus leucopterus) - SOUTH CAROLINA - Moderate, scattered over Saluda County, killing corn and millet. Worst where these crops are near wheat and oats. (Nettles, et al.). TEXAS - Caused considerable damage to grain sorghum and corn, Kaufman County. (Randolph). MISSOURI - Continued to cause light to moderate damage to small corn and grain sorghums in west central and southwestern areas. (Kyd, Thomas). NORTH CAROLINA - Injured corn and milo locally, Cabarrus County. (Bowles). Invaded corn from small grain, Franklin County. (Baldwin). GEORGIA - Moderate on corn in Forsyth County. (Rucker).

CORN EARWORM (Heliothis zea) - FLORIDA - Larvae averaged 2-3 per ear on market corn at Alachua, Alachua County. (Fla. Coop. Sur.). ARKANSAS - Eggs and larvae numerous on sweet corn ears. (Ark. Ins. Rpt.). UTAH - Damage moderately severe in Washington County. In corn 10 days earlier than 1957 at Spanish Fork, Utah County. (Knowlton). Severe in tassels of field corn, Davis County. (Rogers, Knowlton). Larvae in 2-3 percent of early corn ears, areas north of Salt Lake City. (Dorst). TEXAS - Very light on grain sorghums in Brazos and Burleson Counties. (Randolph). WASHINGTON - Developing about normal or a little slower than usual at Walla Walla. (Cook). Heavy on 200 acres of corn at Wapato. Worse than in 1957. (Landis). MARYLAND - Light to moderate in whorls of early sweet and field corn, Queen Annes County. (U. Md., Ent. Dept.). MISSOURI - Egg counts very light on silking field corn, but larvae averaged 1-5 per ear tip in 60-95 percent of earlier corn, southeast area. (Kyd, Thomas). DELAWARE - Prevalent in silks and ears of sweet corn, Sussex County. (MacCreary, Conrad). VIRGINIA - Severe on corn in Henry County with 25 percent damage in one field, less in others. (Pollard). Caused heavy damage to corn in some Prince Edward County fields (Rowell, Striplin) and with sap beetles destroyed 25 percent of corn in a Halifax County field (Rowell, Dinwiddie).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Up to 50-75 per whorl on young sorghum in panhandle counties. (Coppock). MISSOURI - Very heavy on small grain sorghums in extreme southeast area where 80-100 percent of plants had 500-1,000 per plant. Lady beetles building up rapidly. (Kyd, Thomas).

FALL ARMYWORM (Laphygma frugiperda) - ARKANSAS - Beginning to pupate, moth emergence expected about July 13. (Ark. Ins. Rpt.). LOUISIANA - Light to moderate on late corn in Caddo, Bossier and Livingston Parishes. (Spink). MISSOURI - Light to moderate on small corn in widely scattered fields over extreme southeast area. Smaller larvae working down in whorls. Because of hot, dry weather, larger larvae feeding just below ground surface. (Kyd, Thomas). VIRGINIA - Feeding on corn tassels, Appomattox County, caused tassels to weaken and drop or fall over. (Rowell, Smith).

FLEA BEETLES - NEW YORK - Active on sweet corn in Livingston County, with apparently little damage. Less evident on older plants in Hudson Valley. (N. Y. Wkly. Rpt., June 30). TEXAS - Caused light damage on grain sorghum, Dimmit County. (Harding). MARYLAND - Chaetocnema pulicaria adults averaged 5 per sweet corn plant in whorl stage at Price. Bacterial wilt noticeable in some fields. (U. Md., Ent. Dept.).

LEAF-FOOTED BUG (Leptoglossus phyllopus) - TEXAS - Damaged grain sorghum in Brazos and Burleson Counties. (Randolph).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - TEXAS - Damaged Sudan grass in Erath County. First appearance. (Hawkins). Damaged peanuts in Frio and Erath Counties. (Harding, Hawkins).

SAP BEETLES - DELAWARE - Carpophilus lugbris numerous in tassels and silk of sweet corn, Sussex County. (MacCreary, Conrad). NORTH CAROLINA - Feeding on corn silks and tips, Randolph County. (Scott, Farrier).

SLUGS - OHIO - Injury severe to young corn plants following alfalfa over much of northeastern part of State. Persistence attributed to excessive soil moisture. (Neiswander).

SORGHUM WEBWORM (Celama sorghiella) - TEXAS - Pupae in grain sorghum, Brazos and Burleson Counties. (Rnadolph).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - ARKANSAS - Moths emerging in Lafayette County, full grown larvae and pupae in Woodruff County. About 50 percent of larvae have pupated. (Ark. Ins. Rpt.). LOUISIANA - Appeared on late corn, Caddo and Bossier Parishes. (Spink).

STALK BORER (Papaipema nebris) - SOUTH CAROLINA - Reported from Aiken County. (Nettles et al.). NEW YORK - Much more prevalent than in several years. (N. Y. Wkly. Rpt., June 30). MAINE - Probably Papaipema sp. caused moderate to severe damage to young corn at Presque Isle. (Shands).

STINK BUGS - ALABAMA - Nezara viridula light to moderate on corn, Escambia County. (Grimes). OKLAHOMA - Murgantia histrionica averaged 3 per 10 sweeps in one Texas County alfalfa field. (Coppock). TEXAS - Light to medium on grain sorghum, Brazos and Burleson Counties. (Randolph). NEVADA - Chlorochroa sayi numbers moderate on grain in Kings River Valley, Humboldt County. (Galloway, June 27). COLORADO - Spotted infestations of C. sayi in wheat and barley fields, Larimer County. (Ext. Ser., Exp. Sta.). IDAHO - C. sayi adults relatively abundant, but still below economic levels and general on dryland wheat in American Falls, Rockland, Roy and Arbon areas. (Schow). NEW MEXICO - Chlorochroa sayi damaged pinto beans in many Luna County fields. (N. M. Coop. Rpt.).

SUGARCANE BORER (Diatraea saccharalis) - LOUISIANA - Second-generation larvae very light on young corn, St. Landry and Avoyelles Parishes. (Spink).

WIREWORMS - IDAHO - Reported in Cooperative Economic Insect Report 8(23):476 as attacking alfalfa crown buds and corn identified as Limonius californicus. (Gittins). DELAWARE - Destroyed one-quarter acre of field corn, New Castle County. (Bray).

ALFALFA WEEVIL (Hypera postica) - MASSACHUSETTS - Continued to increase range in State. Larvae on second-cutting alfalfa. (Wheeler, June 30). DELEWARE - Adults averaged 260 per 30 sweeps in alfalfa-orchard grass field in New Castle County. Invaded houses bordering field, June 27. Adults and larvae prevalent in portions of Kent County. (MacCreary, Conrad). MARYLAND - First-generation adults averaged 2 per sweep on alfalfa, Queen Annes County. Few larvae present. (U. Md., Ent. Dept.). VIRGINIA - Caused severe damage to alfalfa in one area of Loudoun County where crops were sprayed before first cutting was removed. Some newly hatched larvae present. (Brown). Late stage larvae medium on alfalfa in localized areas, Shenandoah County. (Coiner). IDAHO - Larvae numerous on alfalfa throughout southwestern areas, usually below economic levels. (Waters). WYOMING - Very heavy on elk range, Teton County, with alfalfa being cut. (Davison). UTAH - Caused moderate damage to alfalfa at Enterprise. (Knowlton).

ARMYWORM (Pseudaletia unipuncta) - IOWA - Large numbers of moths appearing in light traps at Ames, Ankeny and Bancroft. Newly-hatched larvae in rain-lodged oats and bluegrass, Story County. (Iowa Ins. Inf.). OHIO - Prevalent on grains and grasses in southern and southwestern areas during past 3-4 weeks, injury now largely subsided. (Goleman). COLORADO - Peak flight recorded June 16 at Springfield, Baca County. (Exp. Sta.). WISCONSIN - Very low numbers of third-instar larvae in a Dane County corn field, concentrated along fence rows. Light trap catches declining. (Wis. Coop. Sur.). SOUTH DAKOTA - Caused some damage to a rye field in Moody County. (Hantsbarger).

APPLE GRAIN APHID (*Rhopalosiphum fitchii*) - MAINE - Heavy migration flights at Presque Isle June 29 and July 2. General on oats. (Shands).

BEET WEBWORM (*Loxostege sticticalis*) - NORTH DAKOTA - Severe infestation damaged wheat in Devils Lake area, Ramsey County. Marginal counts ranged 100-200 larvae per sweep, field counts averaged 6-15 larvae per linear foot of row. Heavy and attacking flax, safflower and garden plantings in Beach area, Golden Valley County. Damaged soybeans at Gardner, Cass County. Scattered infestations expected over State as moth numbers have been high in many areas. (N. D. Ins. Rpt.).

BLACK BUTWORM (*Agrotis ypsilon*) - CALIFORNIA - Heavy in barley fields in Tule Lake area, Siskiyou County. Severe enough to require replanting and treatment. Light in Visalia area, Tulare County. (Cal. Coop. Rpt.). ILLINOIS - Destroyed one field of corn in extreme southern part of State. (Ill. Ins. Rpt.). MISSOURI - Full grown larvae of this species and *Feltia subguthica* damaged small corn in few fields in extreme southeast area. (Kyd, Thomas). OREGON - This species and *Peridroma margaritosa* infested several hundred acres of barley and some oat fields at Lower Klamath Lake, Klamath Falls, June 23. Spots 6-150 feet in diameter completely destroyed, with 10-30 percent of some fields damaged. (Schuh, Vertrees).

ENGLISH GRAIN APHID (*Macrosiphum granarium*) - MAINE - Much less abundant at Presque Isle than at same time in 1957. (Shands, June 28). MINNESOTA - Counts vary greatly from field to field, with as many as 200 per linear foot. Population reduction reported in some areas. Indications of predator buildup. (Minn. Ins. Rpt.). NORTH DAKOTA - Appears to be decreasing in eastern part of State. Averaged 3-4 per head on 50-60 percent of stems in headed wheat. No damage observed. Predators increased with 2-7 lady beetle larvae per square foot in some fields. (N. D. Ins. Rpt.). SOUTH DAKOTA - Numbers declined on small grains. (Hantsbarger). IDAHO - Occasional aphid on winter wheat in northern counties. Stem mothers colonizing on spring grains throughout northern section, spotted areas with up to one aphid per 3 plants. Over-all populations on northern grains relatively low. Predator activity, predominantly lady beetle and lacewing adults, extremely high. (Gittins, Portman). NEVADA - Moderate to heavy on grain in Grass Valley area, south of Winnemucca, Humboldt County. (Galloway, June 27).

WHEAT STEM SAWFLIES (*Cephus* spp.) - VIRGINIA - Larvae of *C. pygmaeus* caused lodging of wheat in several fields, one area of Stafford County. (Morris, Beck). SOUTH DAKOTA - *C. cinctus* on winter wheat in Haakon County caused up to 5 percent damage to crop. (Hantsbarger).

ALFALFA PLANT BUG (*Adelphocoris lineolatus*) - SOUTH DAKOTA - Averaged 3 per 10 sweeps on alfalfa in north central region. (Hantsbarger).

BLISTER BEETLES (*Epicauta* spp.) - OKLAHOMA - Numerous in alfalfa throughout State. Averaged 50-80 per 10 sweeps in one Cimarron County field. (Coppock). LOUISIANA - Heavy localized and spotty infested areas in alfalfa, Tensas Parish. (Spink). NORTH DAKOTA - Damaged soybeans at one location near Gardner, Cass County. (N. D. Ins. Rpt.). MISSOURI - Caused heavy defoliation to very small spots in soybean fields in scattered southeast areas. (Kyd, Thomas). WYOMING - In alfalfa in Buffalo area, Johnson County. Very little damage. (Davison).

CLOVER ROOT BORER (*Hylastinus obscurus*) - IDAHO - In all red clover fields checked in Boise Valley area. (Waters).

GARDEN WEBWORM (*Loxostege similalis*) - DELAWARE - Few larvae in western Kent County alfalfa. (MacCreary, Conrad). ILLINOIS - Appearing on corn and soybeans in extreme southern part of State. (Ill. Ins. Rpt.). MISSOURI - Larvae damaged small corn, grain sorghum, soybeans, cotton and alfalfa over much of State. General and heavy on alfalfa, remained very spotted and scattered on all field crops. (Kyd, Thomas). LOUISIANA - Light to moderate on older alfalfa, Caddo Parish. (Spink).

GREEN CLOVERWORM (*Plathypena scabra*) - DELAWARE - Increased on soybeans, clovers and alfalfa throughout State. Averaged 15-20 per 10 sweeps on alfalfa, upper Sussex County, and 10 per 10 sweeps in one central Kent County field. Heavy on soybeans, Sussex County. Gradual decrease in numbers northward. (MacCreary, Conrad). MARYLAND - Averaged 1-3 per sweep on alfalfa, Howard and Queen Annes Counties, all instars present. (U. Md., Ent. Dept.).

JAPANESE BEETLE (*Popillia japonica*) - DELAWARE - Scattered individuals on field corn throughout State, no apparent damage. Averaged 1 per 10 sweeps in alfalfa. Caused moderate damage to soybeans in central Kent and upper Sussex County. (MacCreary, Conrad).

LYGUS BUGS (*Lygus* spp.) - LOUISIANA - *L. lineolaris* light to moderate on blooming alfalfa, Caddo Parish. (Spink). IDAHO - Generally above 4 per sweep in untreated alfalfa fields checked throughout southwestern section. (Waters). Abundant on approximately 30 acres of safflower and caused noticeable damage to buds. (Schow). *L. elisus* and *L. hesperus* averaged 4 per sweep in alfalfa fields sampled in Bruneau and Grandview areas, Owyhee County. (Gittins). NEVADA - Moderate to heavy populations on seed crops in Orovida area, Humboldt County, reduced by treatment of fields. (Gallaway, Hilbig, June 27). NEW MEXICO - Heavy in seed alfalfa at Hagerman and Dexter, Chaves County. Nymphs becoming numerous in alfalfa fields throughout State. (N. M. Coop. Rpt.). ARIZONA - Caused considerable damage to sweet corn in Pinal County. (Countryman, June 16). Large numbers in Graham County alfalfa fields, 30-40 per 10 sweeps. (Woodruff, June 16). Caused severe damage in Pinal County with 6,032 acres controlled. Increased, with up to 116 per 100 sweeps in 3 fields, Graham County. One treated field showed 12 per 100 sweeps. (Miller).

A NITIDULID (*Meligethes nigrescens*) - OREGON - Migrating to red clover about 2 weeks earlier than in 1957. (Crowell).

PEA APHID (*Macrosiphum pisi*) - MARYLAND - Generally light on alfalfa in all sections of State. (U. Md., Ent. Dept.). DELAWARE - Decreased in alfalfa throughout State. (MacCreary, Conrad). MINNESOTA - Remained high in all districts, 125-600 per 10 sweeps in alfalfa. (Minn. Ins. Rpt.). NORTH DAKOTA - Continued high in alfalfa. (N.D. Ins. Rpt.). SOUTH DAKOTA - Numbers on decline on alfalfa. (Hantsbarger). OKLAHOMA - Light in a few, scattered alfalfa fields in northwest and panhandle counties. None found in most fields. (Coppock). NEVADA - Heavy on alfalfa in Orovida area, Humboldt County. Treatment begun in many fields. (Gallaway, June 27).

POTATO LEAFHOPPER (*Empoasca fabae*) - MASSACHUSETTS - Uncommon on most second-cutting alfalfa. (Wheeler, June 30). MARYLAND - Averaged less than one per sweep on alfalfa, Howard and Queen Annes Counties. Generally lighter than at same time in 1957. (U. Md., Ent. Dept.). WISCONSIN - Low in central and southern alfalfa fields, but may be threat to quality second-crop hay. Averaged 2-4 nymphs per 100 sweeps in Dane County alfalfa. (Wis. Coop. Sur.). OKLAHOMA - First 1958 records were May 20 in Garvin and Cleveland Counties and May 21 in Carter County. (Coppock).

A PSYCHID (*Apterona crenulella*) - IDAHO - Extremely abundant on small stand of alfalfa and sweetclover in Bear River Valley near Preston. Caused considerable skeletonizing of foliage. (Gittins).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - ARIZONA - Population building up rapidly in Yuma area, Yuma County. Situation dangerous as there are almost no predators present. (Roth, June 24.). Increasing over southern part of State. Noted about June 25 when light summer rains and hot weather began. (Miller). OKLAHOMA - Exceedingly low in panhandle and other northwest counties. None found in some fields. (Coppock). COLORADO - Averaged 2-5 per sweep in New Liberty area, Mesa County, June 27. (Exp. Sta.). TEXAS - Medium to heavy on alfalfa in Brazos and Burleson Counties. (Randolph). NEW MEXICO - Generally light in southern part of State. Still some control in alfalfa fields in Chaves County. (N.M. Coop. Rpt.). UTAH - Not yet damaging in southwestern part of State. (Knowlton).

THREE-CORNERED ALFALFA HOPPER (*Spissistilus festinus*) - ALABAMA - Heavy in Butler County alfalfa. (Guyton). LOUISIANA - Moderate on alfalfa, East Baton Rouge Parish. (Spink). TEXAS - Averaged 12-25 per sweep on alfalfa, Brazos and Burleson Counties. (Randolph). Caused some damage to peanuts, Fayette County. (Garner).

YELLOW-STRIPED ARMYWORM (*Prodenia ornithogalli*) - ILLINOIS - One field in extreme southern part of State with 90 percent of plants fed upon by 2 worms per plant. (Ill. Ins. Rpt.). DELAWARE - Few on soybeans, alfalfa and corn throughout State. Damage negligible. (MacCreary, Conrad).

MEXICAN BEAN BEETLE (*Epilachna varivestis*) - ALABAMA - Caused light damage to soybeans in Escambia County. (Grimes). DELAWARE - Caused light to moderate damage to soybeans, upper Sussex County. (MacCreary, Conrad).

PAINTED-LADY (*Vanessa cardui*) - MINNESOTA - Larvae feeding on thistle and cocklebur in Jackson and Nicollet Counties, and at least one instance, have moved to soybeans. (Minn. Ins. Rpt.). WISCONSIN - Larvae on thistles in Rock, Jefferson and Columbia Counties, may become problem on peas not treated for pea aphid. (Wis. Coop. Sur.). IDAHO - Newly emerged adults becoming very common throughout northern counties. Some larval injury to hollyhocks in Moscow area. (Gittins, Portman).

A SERPENTINE LEAFMINER (*Liriomyza* sp.) - FLORIDA - Eggs, larvae and adults averaged 3-20 per plant on cowpeas, Alachua County. (Fla. Coop. Sur.).

RED-NECKED PEANUTWORM (*Stegasta basqueella*) - TEXAS - Damaged peanuts in Houston County. (Garner). GEORGIA - Light on peanuts in several southern counties. (Johnson).

THRIPS - ARIZONA - Caused considerable damage in a 20-acre field of sweet corn, Pinal County. (Countryman, June 16). TEXAS - *Frankliniella* sp. heavy on peanuts in Comanche County. (Hawkins). MARYLAND - Caused light to moderate streaking of corn on Eastern Shore. (U. Md., Ent. Dept.). GEORGIA - Light to moderate on peanuts in several southern counties. (Johnson).

TOBACCO THRIPS (*Frankliniella fusca*) - ALABAMA - Caused extensive damage to peanuts in southern parts of State. All except late planted peanuts are past stage where there will be too much more damage. (Grimes).

A SKIPPER - LOUISIANA - Larvae, probably *Hylephila phylaeus*, as high as 16 per square foot of Bermuda grass sod in pasture at Lafayette. (Spink).

WHITE GRUBS (*Phyllophaga* spp.) - ILLINOIS - Leaf feeding evident on 70 percent of plants on one corn field, Champaign County. Averaged one soil entrance per plant for possible oviposition. (Ill. Ins. Rpt.). KANSAS - Damage to range grasses continued in flint hill region in east central area. Grubs averaged 6-8 per square yard in heavily infested areas. Range grasses being killed by vast numbers of larvae. Controls being applied in localized areas. (Burkhardt, Matthew).

ADDITIONAL NOTES

NEBRASKA - First-brood ARMYWORM activity about ceased in eastern portion of State. Light populations continue feeding in west. Heavy flights indicated at all light trap locations. (Andersen, Pruess). WHEAT HEAD ARMYWORM in wheat Hitchcock, Red Willow, Frontier, Keith and Lincoln Counties. Considerable injury to one field of rye in Lincoln County. (Pruess). HESSIAN FLY general in western area, little damage present. Caused lodging of wheat in southeast and south central regions. (Pruess, Andersen). VARIEGATED CUTWORM continued active in few Lincoln County alfalfa fields, averaged 6-10 per square foot. (Pruess).

NEW YORK - MEXICAN BEAN BEETLE plentiful in all western bean fields examined. Many egg masses present, no larvae seen. EUROPEAN CORN BORER egg masses on early and mid-whorl stage corn in western area. Early-instar larvae in Livingston County. Larvae in 13-17 percent of unsprayed sweet corn plants in Hudson Valley, 1-5 percent of variously sprayed plantings. Hatching and feeding on small corn in Monroe County. Egg masses on 10 percent of early corn, Nassau County. CORN EARWORM detectable in unsprayed Hudson Valley sweet corn. Eggs on 30 percent of early corn in silk, Nassau County. CODLING MOTH entries on unsprayed trees first noted June 23, very numerous by July 2. Peak of larval activity expected within next two weeks at Geneva. Activity increasing in Rockland County, emergence reached peak in Monroe County June 30. First fruit entry June 30. Emergence now at low level in Wayne County. First APPLE MAGGOT flies found in Rockland County July 3. Heavy numbers of ORIENTAL FRUIT MOTH caught in bait traps July 3, Rockland County. Injured peach twigs in Niagara County on same date. (N. Y. Wkly. Rpt.).

FRUIT INSECTS

APPLE APHID (*Aphis pomi*) - CONNECTICUT - Populations increased tremendously on new growth on apple trees, due to cool night and day temperatures, necessitating special control. (Johnson). PENNSYLVANIA - Persistent but not in large numbers, Blair County. Most aphids on apple sucker growth and a few on new twig growth. (Udine). MARYLAND - Heavy on apples in most orchards in Hancock area. (U. Md., Ent. Dept.). OHIO - Abundant in many orchards. (Cutright).

APPLE MAGGOT (*Rhagoletis pomonella*) - MASSACHUSETTS - First adult emerged June 25 at Waltham. (Wheeler). NEW YORK - Fly emergence started again on June 25 and is increasing in eastern area. (N.Y. Wkly. Rpt.). MICH. - Adults emerging, Shelby, June 30. (Hutson). WIS. - First adult May 28, Dane County. (Wis. Coop. Sur.).

APHIDS - RHODE ISLAND - On apple and blueberry at Westerly. (Caroselli). NEW YORK - Difficult to hold in check in orchards in Orange County. Building up in Columbia and Monroe Counties. Problem in Rockland County. (N. Y. Wkly. Rpt., June 30). NEW JERSEY - Problem on apples. (Ins. Dis. Newsl.). OHIO - *Anuraphis roseus* damage more severe than any other time in the last decade. (Cutright). UTAH - Severely infested plum and pecan trees in St. George-Santa Clara area of Washington County. (Knowlton).

CODLING MOTH (*Carpocapsa pomonella*) - NEW YORK - Flight activity increased during the week of June 23 in eastern area. First entries at Geneva, June 23, eggs hatched in Monroe County beginning June 27. (N. Y. Wkly. Rpt.). NEW JERSEY - Few reports of fresh entries in apple. (Ins. Dis. Newsl.). OHIO - Stragglers still emerging in cages. No larvae under bands to July 3. Infestations light to date. (Cutright). INDIANA - No emergence of first-brood moths from emergence cages at Vincennes insectary. Second-brood larvae will not be active in Vincennes area before July 7 at earliest. (Hamilton). MINNESOTA - Active in fruit in all areas. (Minn. Ins. Rpt.). MISSOURI - New entries reported from all parts of State and larvae of all sizes found in many orchards. This indicates that first brood is well spread out and that there will be no break between first and second broods. (Wkly. Rpt. Fr. Grs.). UTAH - Moths numerous in several areas of Washington County. (Knowlton). CALIFORNIA - Light on walnuts in Hollister, San Benito County. (Cal. Coop. Rpt.).

RED-BANDED LEAF ROLLER (*Argyrotaenia velutinana*) - INDIANA - No second-brood larvae have been observed to date at Vincennes. (Hamilton). NEW YORK - First summer-brood moths caught June 27 in eastern area. (N. Y. Wkly. Rpt.). OHIO - Little damage by first generation. (Cutright). PENNSYLVANIA - Beginning to emerge, June 23, on apple in Adams County. Heavy emergence expected week ending July 5. (Asquith). Eggs found, June 26, Adams County. (Pepper).

APPLE AND THORN SKELETONIZER (*Anthophila pariana*) - IDAHO - Leaf rollers reported in CEIR 8(25):537 have been identified as above-named species. (Gittins).

EUROPEAN RED MITE (*Panonychus ulmi*) - OHIO - Generally light except in a few orchards. (Cutright). INDIANA - Averaged 0-4.8 live mites and 0-37.6 eggs per leaf, June 30, depending on control applied. (Hamilton). MARYLAND - Very light on apples. (U. Md., Ent. Dept.).

MITES - INDIANA - Egg populations numerous enough in some apple orchards in Vincennes area to warrant control. *Tetranychus telarius* building up in one orchard. (Hamilton). Considerable population pressure on apples in Orleans area. (Marshall). NEW YORK - *T. telarius* building up in Orleans County. (N. Y. Wkly. Rpt., June 30). CALIFORNIA - *Eotetranychus willamettei* and *Tetranychus pacificus* medium on grapes in Lodi area, San Joaquin County. (Cal. Coop. Rpt.). NEW MEXICO - *Bryobia praetiosa* complex light, caused minor damage to apple foliage in 3 counties. (N. M. Coop. Rpt.). MASSACHUSETTS - *Oligonychus ilicis* bronzing cranberries locally near Wareham. (Wheeler, June 30).

A CHAFER (Diplotaxis popino) - ARIZONA - Seriously damaged peach trees and fruit in the Phoenix area. (Mendenhall, June 26).

JAPANESE BEETLE (Popillia japonica) - DELAWARE - Few on peach trees in central Kent County. No damage yet. (MacCreary, Conrad).

PEACH TWIG BORER (Anarsia lineatella) - UTAH - Damage conspicuous in several areas of Washington County. (Knowlton).

WESTERN PEACH TREE BORER (Sanninoidea exitiosa graefi) - OREGON - Adults emerging in Benton County, July 1. (Every).

A KATYDID - TEXAS - Species unknown, caused heavy damage to peaches in Brazos, Comanche, Erath and Hamilton Counties. (Hawkins).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - MASSACHUSETTS - Terminal injury by first brood uncommon. (Wheeler, June 30). INDIANA - New entrance in peaches at Orleans is at a low ebb. (Marshall). MISSOURI - Some twig injury in southeast area. (Wkly. Rpt. Fr. Grs.).

PLUM CURCULIO (Conotrachelus nenuphar) - MASSACHUSETTS - Caused moderate damage to cultivated blueberries. (Wheeler, June 30). NEW YORK - Has been the most serious insect problem in orchards up to June 30 in Orange County. (N. Y. Wkly. Rpt.). MINNESOTA - Active within fruit in all areas. (Minn. Ins. Rpt.). MISSOURI - Small amount of feeding signs in southeast area, indicating adults of summer generation are out. (Wkly. Rpt. Fr. Grs.).

A CHRYSOMELID (Luperodes bivittatus) - CALIFORNIA - Heavy populations on apricot, peach and plum trees locally in Chico area of Butte County. (Cal. Coop. Rpt.).

PEAR LEAF BLISTER MITE (Eriophyes pyri) - WASHINGTON - Overwintering forms migrating to buds. Severe in many pear orchards in Wenatchee Valley and Lake Chelan areas. (Burts). CALIFORNIA - Heavy on apple trees in Fort Jones area of Siskiyou County. (Cal. Coop. Rpt.).

PEAR PSYLLA (Psylla pyricola) - IDAHO - Adults appearing in low numbers in pear orchards in Sunny Slope area, Canyon County. (Bechtolt).

EUROPEAN FRUIT LECANIUM (Lecanium corni) - MICHIGAN - Eggs hatching in East Lansing, Detroit and Grand Rapids. (Hutson). MINNESOTA - Hatching southern half of State, July 7. (Minn. Ins. Rpt.). CALIFORNIA - L. corni complex light on plums and heavy on peaches in Chico, Butte County. (Cal. Coop. Rpt.).

CURRENT FRUIT WEEVIL (Pseudanthrenus validus) - MASSACHUSETTS - Caused moderate damage to cultivated blueberries. (Wheeler, June 30).

ORANGE TORTRIX (Argyrotaenia citrana) - CALIFORNIA - Lightly damaged boysenberries in St. Helena area, Napa County. Medium on blackberries at Fairfield, Solano County. (Cal. Coop. Rpt.).

CHERRY FRUITWORM (Grapholitha packardii) - MASSACHUSETTS - Adults abundant, laying eggs in blueberry planting, Barnstable County. (Wheeler, June 30).

WALNUT CATERPILLAR (Datana integerrima) - TEXAS - Heavy in Gonzales County, second generation defoliating trees. (Garner).

WALNUT APHID (Chromaphis juglandicola) - CALIFORNIA - Medium on walnuts in Chico area, Butte County. (Cal. Coop. Rpt.). WASHINGTON - Moderate but increasing populations on walnut at Union Gap. (Landis).

PECAN NUT CASEBEARER (Acrobasis caryae) - OKLAHOMA - Survey of an improved pecan orchard in Jefferson County showed 33 percent of nut clusters entered by first-generation larvae. (Flora). LOUISIANA - In pupal stage but just beginning to emerge in some areas. (Spink).

FALL WEBWORM (Hyphantria cunea) - LOUISIANA - Continues serious on pecans throughout State. (Spink).

MEDITERRANEAN FRUIT FLY (Ceratitis capitata) - FLORIDA - No finds since November 26, 1957, making 213 fly-free days through June 27. (Fla. Coop. Sur.).

SHOT-HOLE BORER (Scolytus rugulosus) - UTAH - Serious in a number of Weber and Utah County orchards. (Knowlton).

TRUCK CROP INSECTS

POTATO PSYLLID (Paratrioza cockerelli) - WYOMING - Population in Douglas-Casper area averaged 21 per 50 sweeps on matrimonyvine. None found on early potatoes. Population decreased rapidly north of Casper to an average of 2.5 per 50 sweeps on matrimonyvine in Midwest-Kaycee area. Only 1 psyllid in Big Horn Basin area in 400 sweeps of early potatoes and matrimonyvine; 1 in 100 sweeps of matrimonyvine in Rawlins while 13 found in Medicine Bow on same host. (Davison).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - DELAWARE - Heavy larval feeding locally on tomatoes. Adults and larvae common on potatoes. (MacCreary, Conrad). MASSACHUSETTS - All stages present at Amherst. Damage already serious in one planting of potatoes and eggplants. (Wheeler). PENNSYLVANIA - Adults and larvae on potato in Clearfield County, 15 in a 200 foot row. (Adams). FLORIDA - Averaged 2-3 adults and few eggs and larvae per plant on eggplant at Santa Fe, Alachua County. (Fla. Coop. Sur.).

APHIDS - NAINE - Aphis abbreviata, Macrosiphum solanifolii, Myzus persicae and M. solani increased in numbers as the spring migrations continued. Populations still small. (Shands). MASSACHUSETTS - Increasing on squash, cucumber and melons at Amherst. (Wheeler). NEW YORK - Abundant on early cabbage and tomatoes, Wayne County. (N. Y. Wkly. Rpt., June 30). VIRGINIA - Macrosiphum solanifolii heavy on tomatoes in localized areas of eastern Virginia. (Hofmaster). WISCONSIN - Increasing on beans in Trempealeau County area. (Wis. Coop. Sur.). NEW MEXICO - Brevicoryne brassicae building up rapidly on cabbage in Luna County. (N. M. Coop. Rpt.).

GREEN PEACH APHID (Myzus persicae) - WASHINGTON - Light on potatoes in Yakima and Adams Counties; moderate in Grant County where treatment now required. To July 4, 3000-4000 acres treated. (Landis). NORTH DAKOTA - Light infestations in several potato fields in Walsh and Pembina Counties. (Schulz).

SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons) - COLORADO - Beginning to appear in light traps at New Libery, Mesa County, June 16 and Rocky Ford, Otero County, June 18. (Exp. Sta.). NORTH DAKOTA - Light in potatoes in Walsh and Pembina Counties. (Schulz). WISCONSIN - Population low in southeastern area but high in Rhinelander area. (Wis. Coop. Sur.).

THREE-LINED POTATO BEETLE (Lema trilineata) - PENNSYLVANIA - Beginning to show up on potato in Clearfield County. (Adams).

POTATO TUBERWORM (Gnorimoschema operculella). ARIZONA - Several car loads of potato tubers were dumped as a result of 20 percent infestation with larvae in Maricopa and Pinal Counties. (Miller).

TOMATO FRUITWORM (*Heliothis zea*) - NEW MEXICO - Eggs numerous on tomato plants in fields around Deming, Luna County. (N. M. Coop. Rpt.). DELAWARE - Common on foliage and in fruits of tomatoes in southwestern Sussex County. (MacCreary, Conrad).

LYGUS BUGS (*Lygus* spp.) - ARIZONA - Caused considerable damage to cantaloup, Pinal County. (Countryman, June 16). WASHINGTON - Migrating from cut alfalfa to potatoes, damaging terminal leaflets on 200 acres at Kittitas. Light infestation. (Landis).

THRIPS - NEW JERSEY - Drying up of grain has hastened movement to vegetable crops. (Ins. Dis. Newsl.). WASHINGTON - Damaging potato leaves on 200 acres at Othello. Moderate infestation. (Landis).

HORNWORMS (*Protoparce* spp.) - NEW MEXICO - Generally moderate to heavy, damaging tomatoes in Luna and Dona Ana Counties. (N. M. Coop. Rpt.). DELAWARE - Small larvae common on tomatoes in southwestern Sussex County. (MacCreary, Conrad). ARIZONA - Larvae damaged tomatoes in Graham, Greenlee and Cochise Counties. (Mendenhall, June 26).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - DELAWARE - Mostly late-instar larvae in potatoes in western Kent County, many pupating. (MacCreary, Conrad). VIRGINIA - Damaged potato plants in Henrico County. (Rowell, Davis).

PEA APHID (*Macrosiphum pisi*) - IDAHO - Populations generally low on peas in Benewah and Kootenai Counties. (Portman, Gittins). WASHINGTON - Much heavier than usual in Walla Walla area. Most peas intended for processing treated. (Cook).

MEXICAN BEAN BEETLE (*Epilachna varivestis*) - ALABAMA - Heavy infestations on string beans in Butler County. (Guyton). NEW YORK - Active for about 10 days as of June 27, two egg masses found. First egg mass found June 26 in Livingston County on early planting of snap beans. (N. Y. Wkly. Rpt., June 30). WYOMING - In small numbers in beans in Wheatland area. A few egg masses found. (Davison).

BEAN LEAF BEETLE (*Cerotoma trifurcata*) - ALABAMA - Considerable damage to beans in Butler County. (Guyton).

IMPORTED CABBAGEWORM (*Pieris rapae*) - MAINE - First adult seen June 23. (Shands). DELAWARE - Quite common in cabbage in western Kent County. (MacCreary, Conrad). VIRGINIA - Heavy on kale and collards on Eastern Shore. (Hofmaster).

DIAMONDBACK MOTH (*Plutella maculipennis*) - NEW YORK - Nuisance population present in Hudson Valley. (N. Y. Wkly. Rpt., June 30). VIRGINIA - Heavy on kale and collards on Eastern Shore. (Hofmaster).

CABBAGE LOOPER (*Trichoplusia ni*) - NEW MEXICO - Considerable damage to cabbage in Luna County. (N. M. Coop. Rpt.). DELAWARE - Larvae quite common in cabbage in western Kent County. (MacCreary, Conrad). VIRGINIA - Larvae on collards locally in Accomack County. (Hofmaster).

STRIPED CUCUMBER BEETLE (*Acalymma vittata*) - NEW MEXICO - Damaging chili, bell peppers, squash and beans throughout Dona Ana County. (N. M. Coop. Rpt.). MASSACHUSETTS - Serious damage may occur at Amherst. (Wheeler). PENNSYLVANIA - Common on cucumbers all over Clearfield County. (Adams).

SPOTTED CUCUMBER BEETLE (*Diabrotica undecimpunctata howardi*) - PENNSYLVANIA - Common throughout Clearfield County on cucumbers. (Adams).

BEET LEAFHOPPER (*Circulifer tenellus*) - COLORADO - Abundant in sugar beet fields in Montrose, Delta and Mesa Counties. In Garfield County 40-60 per 100 sweeps. Curly top in sugar beets 15-85 percent. In tomatoes, western yellow blight showing a high incidence in Mesa County. In Delta County curly top incidence in sugar beets and tomatoes present but not as widespread as in Mesa County where commercial plantings and home gardens show high degree of incidence. (Exp. Sta.). UTAH - Curly top has completely taken some tomato patches and fields in Washington County. Others lost majority of plants. Abundant, with tomatoes 45-75 percent gone due to curly top in Weber and Box Elder County fields. (Knowlton). WASHINGTON - Largest light trap catch of season (June 23-27) at Walla Walla. (Cook).

BEET WEBWORM (*Loxostege sticticalis*) - IDAHO - A moderately heavy infestation of larvae in 15 acres of sugar beets near St. Anthony. Considerable feeding damage evident. (Garner). NORTH DAKOTA - Moth numbers continue high in sugar beet fields through northern Red River Valley. Control needed locally for larval infestations. (N. D. Ins. Rpt.).

SUGAR-BEET ROOT MAGGOT (*Tetanops myopaeformis*) - NORTH DAKOTA - Egg hatch beginning in northern valley counties. Some damage. (N. D. Ins. Rpt.).

A PYRAUSTID MOTH (*Nomophila noctuella*) - CALIFORNIA - Reported as damaging lettuce and seedling lettuce plantings. Medium infestations near Castroville, Monterey County. This moth is not usually associated with lettuce. (Cal. Coop. Rpt.).

TWO-SPOTTED SPIDER MITE (*Tetranychus telarius*) - CALIFORNIA - Heavy on hops in Sloughhouse area, Sacramento County. (Cal. Coop. Rpt.).

ALFALFA LOOPER (*Autographa californica*) - WASHINGTON - Worst outbreak since 1900 in western Washington. Damaging vegetable crops and ornamentals. Peridroma margaritosa also involved in this infestation. (Howitt).

JAPANESE BEETLE (*Popillia japonica*) - DELAWARE - Common on asparagus ferns in central Kent County. (MacCreary, Conrad).

ASPARAGUS BEETLES (*Crioceris* spp.) - DELAWARE - C. asparagi and C. duodecimpunctata prevalent on asparagus ferns in New Castle County. (MacCreary, Conrad).

ONION MAGGOT (*Hylemya antiqua*) - WASHINGTON - Worse in Moses Lake than for many years, 30 percent cullage in one packing shed. (Landis). OREGON - Second brood now appearing at Lake Labish with populations low the week of June 29. (Crowell). IDAHO - First generation about 50 percent pupated and adults of second generation emerging in Canyon County as of June 30. (Scott). WISCONSIN - Continues to be problem. More of a statewide pest than heretofore. (Wis. Coop. Sur.). MICHIGAN - Pupating in 6 areas on June 26. (Hutson). NEW YORK - Heavy in sets and continued to injure some seed onions, Rockland County. Damage widespread in Orange County. (N. Y. Wkly. Rpt., June 30). MASSACHUSETTS - Flies very abundant and laying eggs, Amherst. (Wheeler).

FLEA BEETLES - MAINE - Injury to potatoes very light. (Shands, June 28).

ALABAMA - Heavy infestations of Disonycha sp. on beans in Butler County. (Guyton).

MEADOW SPITTLEBUG (*Philaenus leucophthalmus*) - MASSACHUSETTS - Adults on strawberries June 18. (Wheeler).

A GROUND BEETLE (*Harpalus pennsylvanicus*) - CALIFORNIA - Heavily attacking strawberries in Merced area of Merced County in a field adjacent to a recently-plowed grain field. Individual seeds were removed from the fruit without feeding on the flesh. Slight injury by removal of seeds caused a more rapid breakdown of the strawberries. (Cal. Coop. Rpt.).

TOBACCO INSECTS

GREEN PEACH APHID (Myzus persicae) - MARYLAND - Light on tobacco in St. Marys County. (U. Md., Ent. Dept.).

HORNWORMS (Protoparce spp.) - MARYLAND - Light on tobacco in St. Marys County. No moths taken at Fairland. No heavy infestations reported to date. (U. Md., Ent. Dept.).

JAPANESE BEETLE (Popillia japonica) - NORTH CAROLINA - Adults injuring tobacco in local areas in Duplin, Martin and Pender Counties. (Brady, Jones, Reid, Scott).

SOUTHERN POTATO WIREWORM (Conoderus falli) - FLORIDA - Larvae, pupae and adults averaged 4 per 10 tobacco plants on 2 acres of shade tobacco at Quincy, Gadsden County. Estimate about 40 percent of plants damaged and about half had to be reset. Det. T. J. Spilman. (Fla. Coop. Sur., June 27).

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - MARYLAND - Light to moderate on tobacco. Few heavy infestations central St. Marys County. (U. Md., Ent. Dept.).

TOBACCO BUDWORM (Heliothis virescens) - GEORGIA - Light to moderate on tobacco in several southern counties. (Johnson).

COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - NORTH CAROLINA - First generation in lower southeast counties out. Hoke County square infestation low but weevils in all fields. Anson County 3 to 9 percent infestation in 14 fields examined. Warren and Chowan Counties negative in all fields examined. (Cott. News Lett.). SOUTH CAROLINA - Percent infestation decreased slightly due to increase in number of squares. Florence area where insecticides applied virtually no adults and less than 3 percent infestation. (Cott. Lett., Fye et al.). TENNESSEE - Light population in southern tier of counties, no weevils found north of regular infested portion west Tennessee. Controls started infested area, one treated field 10 percent infested. (Locke). GEORGIA - Counts in 42 middle and south Georgia fields ranged from one to 45 percent punctured squares with average of 19.25 percent. First generation weevils in south Georgia fields. (Johnson). ALABAMA - Increasing in south and central areas of State. Counts ranged from 2 percent in treated fields to 62 percent in untreated fields. (Grimes). MISSISSIPPI - Infestations remain exceptionally light and spotty, all counts below 5 percent. Some first generation but no high populations found in delta. (Merkl et al.). LOUISIANA - Madison Parish counts; 43 treated fields averaged 8 weevils per acre, 66 untreated fields averaged 19. Square infestations were 9 percent in 22 treated fields, 33 percent in two untreated fields. Record brood expected last week in July. (Smith et al.). TEXAS - Increased activity in most areas; especially in northeast, east, south central, upper coastal, coastal bend and southwest. (Gaines). ARK. - Emergence continues from hibernation quarters. Some first generation emergence in Drew County but general heavy first-generation emergence expected July 15-20. (Ark. Ins. Rpt.).

BOLLWORMS (Heliothis spp. et al.) - NORTH CAROLINA - No general build up under-way but situation is of concern with so much late cotton. (Cott. News Lett.). SOUTH CAROLINA - Population continues to build up in most of State. Eighteen times as many moths caught at Florence week ending June 18 as during same period in 1957. (Cott. Lett.). GEORGIA - Forty-two fields examined in middle and south Georgia, all infested. Egg counts ranged from zero to 31, averaging 6.5 per 100 terminals. Larvae ranged from zero to 11, averaging 2.9 per 100 terminals. (Johnson). TENNESSEE - Light but general and on increase. Damage

anticipated. (Locke). ALABAMA - Decreased to some degree in south and central parts of State. Counts made in 22 fields averaged approximately 8 eggs per 100 terminals. (Grimes). MISSISSIPPI - Little activity reported; between broods in delta counties. (Merkl et al.). LOUISIANA - Square infestation averaged 4 percent in 23 infested fields, 24 inspected. (Smith et al.). ARKANSAS - Eggs and larvae on decline in most cotton fields. Pupation underway, even with attraction of corn heavy influx of moths into cotton expected after July 15 when emergence is expected to begin. (Ark. Ins. Rpt.). MISSOURI - Light infestations in 152 of 750 fields scouted; 1 to 6 eggs and 1 to 8 larvae per 100 terminals, predators controlling small larvae. (Kyd, Thomas). TEX. - Light to medium except Lower Rio Grande Valley where heavy infestations reported. (Gaines). ARIZONA - None to very few in Pima, Pinal and Maricopa Counties. (Bottger et al.). NEW MEXICO - Appear to be building up rapidly in Chaves and Eddy Counties. Eggs abundant on cotton in Dona Ana and Luna Counties. (N.M. Coop. Rpt.). CALIFORNIA - H. zea light in cotton plantings in Blythe, Thermal and Coachella areas of Riverside County. (Cal. Coop. Rpt.).

PINK BOLLWORM (*Pectinophora gossypiella*) - TEXAS - Light throughout State. (Gaines). FLORIDA - Larvae collected from hibiscus blooms at Plantation Key, Monroe County. (Fla. Coop. Sur.). CALIFORNIA - Blossom survey of 2093 acres of cotton in Imperial and Riverside Counties by Federal, State and County personnel was negative. (Cal. Coop. Rpt.).

BEET ARMYWORM (*Laphygma exigua*) - CALIFORNIA - Light on cotton in Blythe-Ripely area, Riverside County, and Holtville area, Imperial County. (Cal. Coop. Rpt.).

CABBAGE LOOPER (*Trichoplusia ni*) - ARIZONA - Present but not abundant in fields examined in Pima and Pinal Counties. (Bottger et al.). GEORGIA - Light infestations in Tift, Colquitt and Cook Counties. (Johnson).

CLICK BEETLES - MISSISSIPPI - Damage to small squares and terminal buds of cotton. Counts of 30 to 50 adults per 100 plants reported delta area. (Merkl et al.).

COTTON APHID (*Aphis gossypii*) - ALABAMA - Heavy on Geneva County cotton. Light to medium in other south and central areas. (Grimes). GEORGIA - Moderate to heavy in 13 eastern and southeastern counties. Light in Thomas, Johnson, Washington, Jefferson and Hancock Counties. (Johnson). TENNESSEE - Light to heavy, growth of small cotton being retarded in northern counties. Predators reducing growth but weather becoming favorable for build up. (Locke). MISSOURI - Greatly declined, present problem over due to heavy predator and parasite populations. (Kyd, Thomas). ARKANSAS - On decline except where fields treated with insecticides. (Ark. Ins. Rpt.). TEXAS - Heavy infestations northwest area. (Gaines).

COTTON LEAF PERFORATOR (*Bucculatrix thurberiella*) - ARIZONA - Populations remained static in Pinal County. (Countryman, June 16).

COTTON SQUARE BORER (*Strymon melinus*) - CALIFORNIA - Light on cotton squares in Thermal-Coachella areas, Riverside County. (Cal. Coop. Rpt.).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - ARKANSAS - Larvae found in a cotton field in Craighead County, located close to infested corn field. (Ark. Ins. Rpt.).

GRASSHOPPERS - TEXAS - Caused severe damage in northwest area and some damage on field margins in upper coastal, central and north central areas. (Gaines). SOUTH CAROLINA - Causing some damage to cotton in Berkeley County. (Cott. Lett.).

FLEAHOPPERS - ALABAMA - Psallus seriatus damage found in most every field surveyed. Infestations generally light to medium. (Grimes, Rawson). MISSISSIPPI - Light infestations still common in untreated delta fields. (Merk1 et al.). LOUISIANA - Difficult to find most cotton fields Madison Parish. Average 2.13 fleahoppers per 100 terminals in 6 infested fields scouted. (Smith et al). TEXAS - Range from light to heavy in all areas of State. (Gaines). TENNESSEE - Causing considerable damage to young squares, controls necessary in many fields to set squares. (Locke). ARKANSAS - Very few fleahoppers found. (Ark. Ins. Rpt.) SOUTH CAROLINA - Damaging untreated cotton. (Cott. Lett.). NEW MEXICO - Generally moderate to heavy infestations damaging cotton in southern part of State. (N.M. Coop. Rpt.). ARIZONA - Little change in population of a black fleahopper, few Maricopa County fields had populations up to 15 per 100 sweeps, numbers decreased in Pima County. (Bottger et al.).

PLANT BUGS - MISSISSIPPI - L. lineolaris causing more damage than any other insect in delta area. (Merk1 et al.). LOUISIANA - L. lineolaris rather abundant and apparently causing considerable damage in Madison Parish, counts averaged 22 per 100 sweeps. (Smith et al). ALABAMA - Lygus lineolaris continued to present minor problems in central area. (Rawson). NEW MEXICO - Generally heavy infestations on cotton in southern counties. Counts ranged 8 to 80 per 100 sweeps in Luna County. (N.M. Coop. Rpt.). ARIZONA - Populations decreasing Pima County. Remain high in some areas Pinal County where more than 6000 acres treated. (Bottger et al.; Miller).

SALT-MARSH CATERPILLAR (Estigmene acrea) - CALIFORNIA - Light in Blythe area, Riverside County. (Cal. Coop. Rpt.).

SPIDER MITES - ALABAMA - Infestations on experimental cotton plots in Autauga County increased to point necessitating treatment. (Rawson). SOUTH CAROLINA - Becoming problem in fields where rainfall deficient. (Cott. Lett.). MISSOURI - Very spotted infestations, spot treatment in several fields. (Kyd, Thomas). GEORGIA - Light infestations in southeastern counties. (Johnson). ARIZONA - Populations on decline in Waddell area of Maricopa County due to high humidity and activity of Orius spp., averages one per cotton leaf. (Bottger et al.).

STALK BORER (Papaipema nebris) - TENNESSEE - Causing heaviest damage this season than any since survey started. (Locke). ARKANSAS - Found in cotton in Craighead County during week ending June 28. (Ark. Ins. Rpt.).

STINK BUGS - ARIZONA - Low populations all areas. (Bottger et al.). NEW MEXICO - Chlorochroa sayi moderate to heavy spotty infestations damaging squares and bolls in Luna and Hidalgo Counties. (N. M. Coop. Rpt.).

THRIPS - ALABAMA - Heavy in young squares and in blooms of Autauga County cotton. Rather unusual for this time of year. Feeding could cause damage to young squares. (Rawson, Grimes). LOUISIANA - Counts in 35 fields inspected averaged 1.41 per plant, some damage still occurring in presquare late cotton. (Smith et al.). TEXAS - Light in all areas except north plains. (Gaines). ARIZONA - Damaged cotton in Pinal County. (Countryman, June 16).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana) - MICHIGAN - Reported from Sault Ste. Marie for first time, 10 percent pupated June 17; 50 percent pupated at Harbor Springs June 16; 20 percent at McMillan June 17; 10 percent at Calumet June 18 and 30 percent at Epoufette on June 19. (Hutson).
 PENNSYLVANIA - Moth emergence heavy Indiana County late June. Averaged 12 moths per 4-foot red pine. (Udine).

FALL WEBWORM (Hyphantria cunea) NEW JERSEY - Reported in southern part of State. (Ins. Dis. Newsl.).

FOREST TENT CATERPILLAR (Malacosoma disstria) - NORTH DAKOTA - Few spots of severe defoliation in native timber at Ft. Totten; pupation complete. (N. D. Ins. Rpt.). MINNESOTA - Aerial survey Duluth area and north of Cloquet indicates 250-300 square mile area of complete defoliation. Moderate to light on additional 300 square mile area. (Minn. Ins. Rpt.). WISCONSIN - Heavy defoliation in western Vilas and Oneida Counties. Pupating in northern counties. (Wis. Coop. Sur.).

JACK-PINE BUDWORM (Choristoneura pinus) - MICHIGAN - Larvae one-fourth to one-half inch long at Roscommon. (Hutson). WISCONSIN - Pupation complete in Adams County and emergence has begun. (Wis. Coop. Sur.).

LARCH SAWFLY (Pristiphora erichsonii) - MICHIGAN - Egg deposition at Gogebic June 19. (Hutson).

LARGE ASPEN TORTIX (Archips conflictana) - MICHIGAN - Pupating in Houghton, Ironwood, Ewen and Watersmeet areas. Complete defoliation some areas. (Hutson).

PINE SPITTLEBUG (Aphrophora parallela) - MICHIGAN - Mature nymphs present at Roscommon. (Hutson, July 1).

A PINE SAWFLY (Neodiprion pratti) - MASSACHUSETTS - Abundant on pitch pine. (Wheeler, June 30).

SPRUCE BUDWORM (Choristoneura fumiferana) - MICHIGAN - Small larvae at Keeweenaw. (Hutson, July 1). MINNESOTA - Pupation starting Superior National Forest. (Minn. Ins. Rpt., July 3).

SPRUCE SPIDER MITE (Oligonychus ununguis) - MASSACHUSETTS - Infestations increased to damaging in drier parts of State. (Wheeler, June 30).

TORTRICIDS (Argyrotoxa spp.) - PENN. - A. semipurpurana and A. albicomana caused serious defoliation of oaks in south central area. Det. J.G. Franclemont. (Droos).

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - TEXAS - Outbreak developing rapidly in Big Thicket area, southeastern region, where 1950-51 outbreak was very destructive. Outbreak area involves 65,000 acres in Hardin County. (So. For. Pest Rpt., June 25).

CYCLAMEN MITE (Steneotarsonemus pallidus) - NEW JERSEY - Caused considerable distortion to delphinium. (Ins. Dis. Newsl.).

JAPANESE BEETLE (Popillia japonica) - NEW JERSEY - Active throughout State. (Ins. Dis. Newsl.). VIRGINIA - Damage moderate to severe on susceptible ornamental hosts throughout eastern two-thirds of the State. (Morris, et al.). MARYLAND - Light to moderate most sections. Few heavy infestations. (U. Md., Ent. Dept.). OHIO - Adults appearing in considerable numbers in several areas, from 10 days to 2 weeks later than in 1957. (Poliivka). ILLINOIS - First adults appeared in Sheldon area of Iroquois County. (Ill. Ins. Rpt., July 3). MASSACHUSETTS - First adults at Amherst. (Wheeler).

AN APHID (*Pemphigus bursarius*) - CALIFORNIA - Heavy on Lombardy poplars at Greenfield, Monterey County. (Cal. Coop. Rpt.).

TWO-SPOTTED SPIDER MITE (*Tetranychus telarius*) - MASSACHUSETTS - Damaged perennials and some shrubs. (Wheeler, June 30). SOUTH DAKOTA - Abundant on various ornamentals in eastern part of State. (Hantsbarger).

BLISTER BEETLES - WEST VIRGINIA - *Epicauta murina* defoliating mimosa trees in Hampshire County. (W. Va. Ins. Sur., June 27). NORTH DAKOTA - High populations defoliating year old caragana liner stock in nurseries at Towner and Bottineau. (N. D. Ins. Rpt.).

A BOSTRICHID (*Amphicerus cornutus*) - ARIZONA - Pruning twigs and boring in limbs of palo verde trees in Phoenix area. (Mendenhall, June 26).

COTTONY MAPLE SCALE (*Pulvinaria innumerabilis*) - NORTH DAKOTA - Eggs about to hatch in heavy infestations reported at Rugby, Pierce County. (N. D. Ins. Rpt.).

ELM LEAF BEETLE (*Galerucella xanthomelaena*) - VIRGINIA - Larvae damaged elms at Front Royal. (Coggsdale). Medium damage, Norfolk and Washington Counties. (Thomas, Groseclose, Morris). MARYLAND - Heavy this year. (U. Md., Ent. Dept.). DELAWARE - Heavy damage, pupating Sussex County, moderate to light in Kent and New Castle Counties. (McCreary, Conrad). WASHINGTON - Adult and larval damage in city of Yakima. (Landis).

WHITE PINE WEEVIL (*Pissodes strobi*) - VIRGINIA - Damaged most of native and planted stand of white pine locally in Montgomery County. (Rowell).

MIMOSA WEBWORM (*Homadula albizziae*) - MARYLAND - First infestation noted Lanham. (U. Md., Ent. Dept.). DELAWARE - Low populations scattered in Kent and Sussex Counties. (McCreary, Conrad).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - NORTH CAROLINA - *Aedes sollicitans* heavy in Dare County, especially around Oregon Inlet. Light around Manteo, fairly heavy in Hyde and Pamlico Counties. (Usry). MINNESOTA - In 213 larval collections in Twin City area, *Culex territans* was present in 138 and in 23 biting collections, *Aedes vexans* was found in 15. (Minn. Ins. Rpt.). NEVADA - *Aedes nigromaculis* increasing in Minden area, Douglas County (Roberts, June 27) and *Aedes* spp. heavy in Gabbs, Nye County. (Rebuffo, June 27). CALIFORNIA - Light trap collections indicate *Culex tarsalis* most numerous species. *C. stigmatosoma* second most numerous in central coastal area and Sacramento Valley, replaced by *C. quinquefasciatus* in San Joaquin Valley. *Culiseta inornata* occurred more widely in central coastal area than elsewhere. (Peters).

HORN FLY (*Siphona irritans*) - OKLAHOMA - Averaged 200-300 per cow in north-western counties. (Coppock). NEVADA - Increasing in Douglas County. (Roberts, June 27).

TABANIDS - ARKANSAS - Remained numerous in most areas of State. (Ark. Ins. Rpt.).

SWALLOW BUG (*Oeciacus vicarius*) - IDAHO - Heavy in a sawmill at Bovill, many workers bitten. (Manis).

BENEFICIAL INSECTS

HONEY BEE (*Apis mellifera*) - RHODE ISLAND - Swarming remains common. Three cases of foul brood discovered in Washington County. (Mathewson, Bannister, Boaro). MINNESOTA - Sweetclover bloom has started in Twin City area and bee colonies are gaining very rapidly. (Minn. Ins. Rpt.).

PREDATORS - ARIZONA - Increasing in all southern cotton fields, with as many as 30 lady beetles per 100 sweeps and 15-20 lacewings. (Miller). *Collops* sp., *Nabis* sp. and spiders continue abundant in most fields. (Bottger, Sheets, Kaufman).

MISCELLANEOUS INSECTS

ANTS - CONNECTICUT - *Tetramorium caespitum* and *Camponotus herculeanus pennsylvanicus* infested numerous homes, especially basements, during June. (Johnson). RHODE ISLAND - Alates of *C. herculeanus pennsylvanicus* generally evident. (Mathewson, Caroselli).

A CAMEL CRICKET - NORTH DAKOTA - Continued reports of home infestations in southeastern area of State. (N. D. Ins. Rpt.).

EUROPEAN EARWIG (*Foricula auricularia*) - MASSACHUSETTS - Very abundant and destructive to seedlings and small transplants. (Wheeler, June 30). RHODE ISLAND - Very heavy in and around Providence area. (Mathewson). Also in South Kingston. (Howard). CONNECTICUT - Invaded numerous homes and grounds in Westville area of New Haven. (Johnson). NEVADA - Caused moderate to heavy damage to plants in Reno-Sparks area, Washoe County. (Bechtel, Lauderdale, June 27).

FOUR-LINED PLANT BUG (*Poecilocapsus lineatus*) - MASSACHUSETTS - Very abundant at Cambridge, killing weeds and moved to chrysanthemums and tomatoes. (Wheeler, June 30).

WHITE-FRINGED BEETLES (*Grapholita* ^{nathus} spp.) - FLORIDA - Larvae and pupae collected June 11 at Bratt, Escambia County. First adult reported June 11 at Milton, Santa Rosa County, and larvae collected in Walton County June 27. (Fla. Coop. Sur.).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Protoparce sexta quinq.	Heliothis zea vires.
ARKANSAS						
Atkins 6/19-25	10	21		12		48
Fayetteville	6	16		9		17
Hope		1				2
Kelso	1	16		13		4
Morrilton	48	16				16
Stuttgart	7	4		13		4
FLORIDA						
Gainesville 7/1					1	
Quincey 6/30					3	
ILLINOIS						
Urbana 6/27-7/2	299	8	1	97		
KANSAS						
Hays 6/17-30	2766	235		485		2
Manhattan 6/26-30	74	6		20		
LOUISIANA						
Baton Rouge 6/27-7/2	6	2	277	3		
NEBRASKA						
Box Butte 7/1-7	1192					
Kearney	639					
Lincoln	2953					
North Platte	5751					
Scottsbluff	417					
MAINE						
Monmouth 6/29-7/5	15					
Orono 6/29-7/5	4					
Presque Isle 6/22-28	2					
MARYLAND						
Fairland 6/27-7/2	7	8	2	4		
MISSISSIPPI						
*Stoneville 6/27-7/3	89	74	200	17		9 4
NORTH CAROLINA						
Clayton 7/3	1		13		2	7
Faison 7/3			7			2
SOUTH CAROLINA						
Charleston 6/23-29	4	4	32	8	2	8 3
Clemson 6/28-7/4	3	15	18	8	5	35 1
Florence 6/29-7/5	11	24	176	30	7 2	504 78
TEXAS						
Brownsville 6/16-27	3	2	31			108 2

*Four traps - Stoneville

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

LARGE WHITE BUTTERFLY (Pieris brassicae (L.))

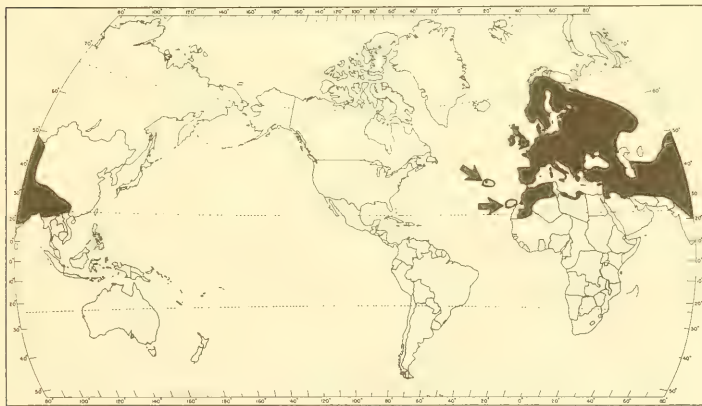
Economic Importance: Sporadic outbreaks of this pest occur throughout most of Europe. Such infestations cause serious losses to crucifers in Europe and Asia, and on occasions complete loss of the crop has been reported. The populations were so heavy in 1927 in Poland that control measures were not effective in preventing destruction of most of the food plants. Many host plants have been occasionally attacked. In Turkestan, USSR, during 1913, 90 percent of the cotton crop was destroyed in some areas. Generally the late broods are the most serious and are largely migrant. Serious populations have resulted in England from butterfly flights from the Continent, and large migrations have been observed in Switzerland passing over the Jura Mountains and the Alps southward.



Larval Damage

Distribution: Occurs throughout Europe, North Africa and the Middle East generally and range extends through northern India and southern Siberia to Tibet and China.

Hosts: Feeds on many crucifers, garden and ornamental plants; but generally seems to prefer crucifers.



General Distribution of Pieris brassicae

Life History and Habits: Adults emerge from the overwintering pupae in April or May. Eggs are laid in clusters, but sometimes singly, on the under surface of leaves, each cluster consists of 4 to 100 eggs. Eggs hatch in 5 to 8 days and larvae feed through five instars. The total period from egg to mature larva varies from 4 to 6 weeks. The chrysalis is attached to plants, sticks, stones, and especially to walls and fences. In England, there are generally two broods a year, the first laying eggs in May and the second in July and August. In USSR, however, three broods are reported, and sometimes a partial fourth brood is produced, though this is unusual. Normally the latter broods are heavily attacked by parasites.

Description: The adults of *Pieris brassicae* and *P. rapae* are similar in general coloration and markings, but *P. brassicae* is the larger of the two species, having a wing expanse of 60 mm. compared to 50 mm. in *P. rapae*. The markings on the wings of *P. brassicae* are as follows: Female forewing with blotch of black at tip, round spot near center of wing, another spot nearer the inner margin, and a tapering spot on the inner margin of its point toward the base of the wing. One spot on hindwing, situated near middle of coastal margin. No markings on forewing of male, with exception of those at tips. The larvae of *P. brassicae* and *P. rapae* more readily distinguishable; ground color of *P. brassicae* blue-green, spotted with black and *P. rapae* an intense leaf green, also spotted with black. In *P. brassicae*, a narrow, yellow median dorsal stripe is present, with two similar, but wider, stripes present on the sides. The median dorsal stripe in the larva of *P. rapae*, orange, with a broken yellow stripe on each side. Surface of body in both species covered with small, warty projections, each containing a hair. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies.) CEIR 8(28) 7-11-58



Larva



Female



Male

Figures (except map): All stages from Rostrup, S. and Thomsen, M. 1931. Die Tierischen Schädlinge des Ackerbaues. 367pp., Berlin. Larval damage from Balachowsky, A. and Mesnil, L. 1936. Les Insectes Nuisibles aux Plantes Cultivees. Vol. 2, pp. 1141-1921. Paris.

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Cooperative
ECONOMIC INSECT
REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearinghouse and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

EUROPEAN CORN BORER caused moderate to severe stalk breakage on Eastern Shore of Maryland. (p. 625). Infestation north central Iowa lower than in 1957. Larval counts heavy in southeastern South Dakota. (p. 626). CORN LEAF APHID heavier than usual in Alabama, heavy in some fields in Garvin County, Texas. (p. 627).

SOUTHWESTERN CORN BORER found for first time in Craighead and Phillips Counties, Arkansas. (p. 627). Several severe ARMYWORM infestations in North Dakota. Damaged rye in Roberts County, South Dakota. (p. 627). Heavy light trap catches. (p. 640). FALL ARMYWORM lighter than in past four seasons in Arkansas. (p. 628). WEBWORMS moderate to severe in North Dakota. (p. 628).

MEADOW SPITTLEBUG adults abundant in some locations of Iowa, Illinois and Ohio. (p. 629). First 1958 report of SPOTTED ALFALFA APHID in Nebraska. (p. 630).

BEEF LEAFHOPPER numerous in areas of several States, curly top incidence rather high in some areas. Some control of breeding areas in Idaho. (p. 633). Fifth POTATO PSYLLID survey in Colorado, Wyoming and Nebraska. (p. 633).

PINK BOLLWORM found for first time since 1947 in Maricopa County, Arizona. (p. 636). LYGUS BUGS increasing in cotton in area of Arizona and in Tennessee; major problem in many cotton fields in southern New Mexico. (p. 636).

NEW STATE RECORDS: An APHID on wheat in Minnesota (p. 629), a SPITTLEBUG in Tennessee (p. 630) and BIRCH LEAF MINER in Indiana (p. 638).

CORRECTIONS. (p. 640). ADDITIONAL NOTES. (p. 637).

CORRECTION: An error was made in the printing of the cover for the Index to Volume 7, 1957. The top of the outside cover should read - Volume 7 Index - 1957 in place of Volume 8, No. 1 - January 3, 1958. This was mailed with the July 11 issue of the Report.

WEATHER OF THE WEEK ENDING JULY 14

One of the longest heat waves since 1940 in the Far Southwest and range and forest fires in Oregon highlighted the hot, dry weather west of the Continental Divide, in Texas and the southwestern Great Plains. Frequent thunderstorms, some with damaging winds and hail, local flood producing rains and high humidity made up the weather pattern in most of the remainder of the country. The week was unusually cool for July in middle and northern portions of the mid-Continent area as a result of successive surges of cool Canadian air into those areas, and near normal temperatures prevailed in the South and East. On the 11th, the month-old heat wave in the Far Southwest pushed the mercury up to 118° and 111° at Phoenix and Tucson, Arizona, respectively, temperatures which matched the all-time highs at both places. On the 13th, Roswell, New Mexico, with 109° and Lubbock, Texas, with 106° recorded their highest temperatures for that date.

More showers in north central areas were beneficial in maintaining and helping to replenish soil moisture. However, livestock and irrigation-water supplies are still very short in many localities of northeastern Montana. In the southwestern Great Plains, dryland sections of New Mexico need rain, and 3 weeks of hot, dry weather, have nearly depleted soil moisture supplies in the low rolling plains and northern plateau sections of Texas. Heavy rains the past week satisfactorily replenished soil moisture in most of Tennessee and northern portions of Alabama and Georgia. High winds caused much property damage in the vicinity of Topeka and other areas of Kansas, and a flash flood at Atchison, Kansas, took several lives. Flash floods in north central Illinois, resulting from 8 to 10 inches of rain during the night of July 13-14, caused considerable damage. (Summary supplied by U. S. Weather Bureau.)

WEATHER BUREAU 30-DAY OUTLOOK

MID-JULY TO MID-AUGUST 1958

The Weather Bureau's 30-day outlook for mid-July to mid-August calls for temperatures to average above normal over the southern third of the nation, along the west coast and in the middle Atlantic States. Below normal temperatures are in prospect for the northern half of the country between the eastern Great Lakes and the northern Rocky Mountain States. In unspecified areas near normal averages are indicated.

Precipitation in the northern half of the country is expected to exceed normal between the Rockies and the Appalachians. Subnormal rainfall is indicated for the Gulf and South Atlantic States as well as the far West. Elsewhere near normal rainfall amounts are predicted.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 a half year.

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - ILLINOIS - Light to moderate, concentrated in fencerows, roadsides, grass waterways and ditch banks. Attacked marginal rows of soybeans and corn in some instances. Moderate to heavy in occasional southern hay fields. (Ill. Ins. Rpt.). LOUISIANA - Increased considerably in pasture grasses throughout State. Neoconocephalus sp. remained most abundant. (Spink). WISCONSIN - Remained generally low, but warm weather following rain stimulated hatching of Melanoplus femur-rubrum. Alfalfa fields with significant numbers, few. Up to 27 nymphs per square yard in a Winnebago County field. (Wis. Coop. Sur.). MINNESOTA - M. bivittatus hatch nearly complete in west central and northwest districts, most nymphs in first to third instars, few fourth instar. Occasional adult of M. bilituratus and M. differentialis in some fields. Recent rains caused heavy mortality of grasshopper nymphs in some areas. Counts of 20-40 per square yard in field margins in western Polk and Roseau Counties, predominantly first to third instar M. bivittatus. (Minn. Ins. Rpt.). NORTH DAKOTA - Light to threatening in an area along Benson-Pierce County line and area west of Cando, Towner County. Adult M. bivittatus averaged 5-30 per square yard in field crops in Benson-Pierce County area, with severe leaf stripping in field margins. (N. D. Ins. Rpt.). SOUTH DAKOTA - M. bilituratus infestations spotty in Bennett, Shannon and Washabaugh Counties, as well as Fall River, Custer, Pennington and Lawrence Counties from flights entering State. Averaged 1-15 per square yard in fields. Approximately 20,000 acres treated in Martin area, Bennett County. (Hantsbarger). TEXAS - Considerable progress made in rangeland control program in northern panhandle counties. (Gaines). Through July 11 total of 696,514 acres of roadsides, range and idle lands treated under cooperative control program. (PPC). IDAHO - Hatch continued in Nez Perce and Latah Counties. Numbers large enough to be problem in some crop areas in Madison and Butte Counties. Late-instar nymphs and adults, predominantly M. bivittatus and M. bilituratus, varied 5-300 in control areas of Nez Perce and Latah Counties. Concentrating on vegetative covering. Approximately 30,000 acres of this area treated as of July 10. (Evans, Gittings). NEVADA - Damage to grain and some alfalfa caused mostly by nymphs of Trimerotropis spp. Numbers varied from field to field. (Bechtel). UTAH - Hatch extremely heavy at Keg Mountain in Delta area, Millard County, on rangelands and railroad right-of-ways and heavy on range in Karp area, Beaver County. M. packardii and M. bilituratus caused damage near Circleville and at Marysville. Treatment applied to 140 acres of rangeland south of Hatch. (Knowlton). COLORADO - Situation subsiding with harvest of grain crops. (Ext. Serv., Exp. Sta.). Through July 11 total of 1,445,595 acres of roadsides, rangeland and idle lands treated under cooperative control program. (PPC).

MORMON CRICKET (Anabrus simplex) - UTAH - Outbreak reported near Enterprise. Bait applied to 2,000 acres of Piute County. Reported in Alton area, Kane County. (Knowlton).

EUROPEAN CORN BORER (Pyrausta nubilalis) - NEW JERSEY - Damage light in fields observed, Burlington County. (Ins. Dis. Newsl.). PENNSYLVANIA - Larvae as large as one-half inch long feeding in whorls of field corn in Franklin County. No serious injury. (Pepper). MARYLAND - Increased in early planted sweet and field corn in central area and on Eastern Shore. Heavy in many early-planted sweet corn fields, damage from stalk breakage moderate to severe. Pupation about complete, emergence underway on lower Eastern Shore, July 10. (U. Md., Ent. Dept.). VIRGINIA - Attacking small corn acreages in Wythe, Russell, Pittsylvania and Middlesex Counties, with some damage. (Morris, et al.). Total of 391 moths taken in light trap at Painter, Accomack County, in one night. Larvae in about 50 percent of ears or shanks and in most stalks of sweet corn at Painter. (Hofmaster). NORTH CAROLINA - Averaged 3-4 larvae per stalk in 17 acres of corn, Surry County. (Shaw, Rabb). WISCONSIN - First-brood populations low in southern

and western sections. Observations indicate continued moth flight and recent egg laying in field and sweet corn in vicinity of Lake Winnebago. No egg development and no larval feeding in Outagamie County, July 9. Egg development and larval feeding noted in Winnebago, Fond du Lac and Dodge Counties, but not in Outagamie County. (Wis. Coop. Sur.). ALABAMA - Most larvae pupated, second moth flight well underway in northern part of State. Eggs being deposited on young corn. (Eden, Ruffin). MINNESOTA - Cool nights retarded moth flights and egg deposition in all districts. Further extensive egg deposition not expected. Egg mass and whorl feeding counts for southwest were 12 and 88; southeast were 0 and 20; for central district, 0 and 4; west central 0 and 8. Indications are first generation borer populations are considerably less than expected based on spring surveys. (Minn. Ins. Rpt.). OHIO - Averaged 47.8 larvae per 100 plants in 25 percent of plants in untreated check plots of early sweet corn at Columbus. First second-generation pupae observed July 9. (Triplehorn). IOWA - Infestation in corn averaged 61 percent in 32 Boone County fields, compared with 66.6 percent, same period 1957. Infestation in north central part of State averaged 24.8 percent as compared with 57.3 percent for same time in 1957. In the north central area there are fewer than half as many infested plants and only 25 percent as many borers per 100 plants as in 1957, but larval development is similar to or ahead of 1957. (Iowa Ins. Inf.). INDIANA - Larvae, mostly second instar, infested 8 plants per 100 in 60-66 inch corn in Newton County. Few egg masses found. (Gould). MISSOURI - Approximately 50 percent pupation, 10 percent emergence in southeast section. Egg-laying beginning. Approximately 50 percent of first-brood larvae parasitized by *Lydella* sp. (Jackson, Peters). Larvae now 85 percent fourth and fifth instars in central section. Pupation about 4 percent, but only in earliest corn. (Munson). ARKANSAS - Continued to emerge, eggs being laid in several areas of State. (Ark. Ins. Rpt.). NORTH DAKOTA - Egg-laying underway in eastern counties, with 50 egg masses per 100 plants in one early field near Erie, Cass County. (N. D. Ins. Rpt.). SOUTH DAKOTA - Egg hatch complete, shothole injury in 74 percent of plants and first to fourth-instar larvae, predominantly third instar, averaged 343 per 100 plants in southeast region. In south central region egg masses averaged 12 per 100 plants with shothole injury in 36 percent of plants and first to third-instar larvae, predominantly second instar, averaged 198 per 100 plants. Egg masses averaged 11 per 100 plants in east central region, shothole injury evident in 18 percent of plants and larvae, predominantly first instar (ranging first to second instar) averaged 68 per 100 plants. (Hantsbarger).

BILLBUGS - NORTH CAROLINA - *Calendra* spp. local in corn in Beaufort County. (Jones, Farrier). Severe on 3-4 acres of corn, Craven County. (Farrier).

CORN EARWORM (*Heliothis zea*) - NEW JERSEY - Only one egg per 150 stalks observed July 8. Mature larvae in emerging tassels. (Ins. Dis. News1.). MARYLAND - Light in whorls and tassels of early corn, Queen Annes County. (U. Md., Ent. Dept.). VIRGINIA - Damaged some sweet corn in Bedford County, allowing sap beetles to gain entrance to developing ears. (Rowell). Infesting 15-20 percent of sweet corn at Painter, Accomack County. (Hoifmaster). ALABAMA - Eggs light to moderate on silks of early corn in northeast area. Few adults seen. (Grimes). Adults prevalent on peanuts in southeast area. (Eden). OHIO - Examination of ears from untreated check plots of very early sweet corn at Columbus indicated only 6 percent infestation. (Triplehorn). OKLAHOMA - Numbers in ear corn in Johnston and Marshall Counties reduced sharply, apparently due to disease. Medium to heavy in Garvin County. (Coppock). Populations down in central area, very little egg deposition on corn. (Arbuthnot). TEXAS - Light in grain sorghum and corn, Jones County. (Turney). UTAH - Larvae numerous in corn, some damage to tassels, Washington County. Appears threatening in Davis, Box Elder and Cache Counties. (Knowlton). COLORADO - Being taken in light traps in Baca, Otero and Mesa Counties. (Sta.).

CORN LEAF APHID (Rhopalosiphum maidis) - ALABAMA - General in early corn in several northeast counties. Heavier than usual for this season of year. (Grimes). NORTH DAKOTA - Few scattered infestations in late fields of oats and barley, generally light. Few fields required control. (N. D. Ins. Rpt.). UTAH - Damaged few fields of barley in Delta area, Millard County, and several fields of spring barley at Escalante, Garfield County. Many lady beetles present in latter location. (Knowlton). TEXAS - Heavy on corn and grain sorghum, Jones County. Medium on grain sorghum, Jefferson County. (Turney, Hawkins). OKLAHOMA - Light, general in sorghum, central, eastern and south central counties. Heavy (to tens of thousands per plant) in some fields in Garvin County. (Coppock).

CHINCH BUG (Blissus leucopterus) - OKLAHOMA - Averaged 0.5 adult per seedling sorghum plant, Stillwater area. (Henderson). Generally medium to heavy on mature sorghum and corn, south central counties. Light, scattered damage to late-planted sorghums in same area. (Coppock).

CORN SILK BEETLE (Luperodes brunneus) - MISSISSIPPI - Heavy on corn in Oktibbeha County, feeding on silks. (Young).

FLEA BEETLES - OKLAHOMA - Common in scattered fields of young sorghum, south central counties. Numbers down in all areas. (Henderson, Coppock). UTAH - Chaetocnema pulicaria damaged young corn and milo in parts of Washington County. (Knowlton).

SAP BEETLES - VIRGINIA - Heavy on sweet corn, Page and King George Counties. (Rowell, Allison, Hall). Very numerous, adults present on every sweet corn ear at Painter Branch Station of Virginia Truck Experiment Station, Accomack County. (Hofmaster). Caused heavy damage to field corn, King George and Charlotte Counties. (Rowell, Hall, Morton). Present in every sample of damaged corn. (Morris). NORTH CAROLINA - Injured ears of sweet corn, Iredell and Randolph Counties. (Ivy, Young, Farrier).

SOUTHERN CORNSTALK BORER (Diatraea crambidoides) - NORTH CAROLINA - Infested 15 percent of stalks in 10-acre corn field, 2 percent in two other fields on same farm, Northampton County. (Wright, Farrier). ALABAMA - Most larvae have pupated in northern part of State. (Ruffin, Eden).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - ARKANSAS - Emergence about 12 percent. Found for first time in Craighead and Phillips Counties. (Ark. Inst. Rpt.). LOUISIANA - Larvae, apparently second generation, infested 70 percent of corn plants in one field at Belcher. (Spink). OKLAHOMA - Second-generation eggs present in Stillwater area. (Arbutnot).

STALK BORER (Papaipema nebris) - INDIANA - Caused serious destruction to outside 4 rows in corn in Starke County, with some injury over to eighth row, in area approximately 500 feet long adjacent to weedy fence row. Also damaged corn in Howard County, east of Kokomo. Killed 4 rows along field edge. (Gould). PENNSYLVANIA - Injured garden sweet corn in Franklin County. (Pepper). Appears more abundant generally than usual. (Udine).

SUGARCANE BORER (Diatraea saccharalis) - TEXAS - In Jefferson County grain sorghum. (Hawkins).

A WEEVIL (Anacetrinus deplanatus) - TEXAS - Heavy in grain sorghum in McLennan County. (Morris).

ARMYWORM (Pseudaletia unipuncta) - NORTH DAKOTA - Several severe infestations confined to heavy stands of rye at Wahpeton, LaMoure and Dwight, Richland County, at Leonard in Cass County and at Ellendale, Dickey County. Larvae near maturity, some pupation. Averaged 12-20 larvae per square foot, highest in field margins, with 20-30 percent of heads clipped in some fields. Survey

in other cereals from South Dakota border to Grand Forks showed only small numbers at most locations. No damage observed. Largest larvae about half-grown. (N. D. Ins. Rpt.). DELAWARE - Averaged one small larva per 10 sweeps in alfalfa statewide. Heavy adult flights July 5-6, New Castle County. (MacCreary, Conrad). ILLINOIS - Averaged 1.2 per linear foot in rank grains in northern area. In most heavily infested fields 30-50 percent mortality from parasites and disease. (Ill. Ins. Rpt.). SOUTH DAKOTA - Damaging infestations in rye in Roberts County, up to 90 percent of leaves stripped. (Hantsbarger). MINNESOTA - Numerous scattered reports of infestations from west central and northwest districts. Some fields have 8 to 10 per square foot, but infestations spotty. (Minn. Ins. Rpt.).

FALL ARMYWORM (*Laphygma frugiperda*) - INDIANA - Feeding on corn in Starke and Porter Counties. Scattered over field in latter county. (Gould). TEXAS - Larvae in fourth and fifth instars on corn, Jones County. (Turney). ALABAMA - Adults prevalent on southern peanuts. (Eden). ARKANSAS - First-generation larvae pupating in southern part of State. Lighter and caused less damage than in past four seasons in this area. (Ark. Ins. Rpt.). OKLAHOMA - No buildup in alfalfa at present time. All fields surveyed had 3 or less larvae per 10 sweeps. (Coppock). FLORIDA - Averaging 3-5 per plant in 12 acres of millet in Alachua County. (Fla. Coop. Rpt.).

GREEN CLOVERWORM (*Plathypena scabra*) - MARYLAND - Increased on soybeans on lower Eastern Shore. (U. Md., Ent. Dept.). DELAWARE - Prevalent on soybeans and alfalfa statewide. (MacCreary, Conrad).

LESSER CLOVER LEAF WEEVIL (*Hypera nigrirostris*) - WYOMING - Caused considerable damage to red clover, Teton County, very little damage in Park County. (Davison).

RICE STINK BUG (*Oebalus pugnax*) - LOUISIANA - Average of 112 per 100 sweeps on rice at Gueydan. Grass abundant in fields. (Spink).

A HESPERID - LOUISIANA - Larvae infesting Bermuda grass pasture in Lafayette Parish. As high as 16 per square foot of sod. (Spink).

HESSIAN FLY (*Phytophaga destructor*) - SOUTH DAKOTA - Damage on winter wheat in west central area. (Hantsbarger).

CUTWORMS - NEVADA - Moderate to severe damage to alfalfa in Yerington area, Lyon County. (Batchelder, Lauderdale).

ENGLISH GRAIN APHID (*Macrosiphum granarium*) - NORTH DAKOTA - Declined rapidly, with only occasional late grain field showing more than a trace. Lady beetles, lacewings and syrphids numerous in most fields. (N. D. Ins. Rpt.).

THRIPS - NORTH DAKOTA - Not abundant in southwestern counties, with less than 2 adults per 10 plants. Eggs hatching in Grand Forks County. Nymphs averaged 10 per plant. Not considered economic. (Post). Adults high in few late fields of barley in parts of western Cass County. Averaged 5 per stem. (N. D. Ins. Rpt.). UTAH - Numerous on blooming alfalfa, sometimes on wheat, western Millard County. (Knowlton). NEW MEXICO - Heavy in seed alfalfa near Hagerman and Dexter, Chaves County. (N. M. Coop. Rpt.).

WEBWORMS - NORTH DAKOTA - Moderate to severe, damaged soybeans, wheat and flax crops at scattered locations in all areas of State. Considerable control being applied. (N. D. Ins. Rpt.). OKLAHOMA - Greatly reduced in eastern and southern sections; averaged 0-3 per 10 sweeps in most alfalfa fields. (Coppock).

BLISTER BEETLES - NEBRASKA - *Epicauta fabricii* and *Epicauta* sp. averaged 32 per 100 sweeps in alfalfa in both the east and west. (Andersen). COLORADO - Continue to cause damage. (Ext. Serv., Exp. Sta.). ALABAMA - Caused moderate damage to alfalfa, De Kalb County. (Grimes).

AN APHID (*Toxoptera viridi-rubra*) - MINNESOTA - Collected on wheat from Warren area. First record for State and first record for this species on wheat according to A. A. Granovsky who made the determination. (Minn. Ins. Rpt.).

APPLE GRAIN APHID (*Rhopalosiphum fitchii*) - MAINE - General on oats at Presque Isle. Lady beetles keeping populations down. Heavy on oats in central section of State. Some growers treating. (Shands).

WHEAT-HEAD ARMYWORM (*Faronta diffusa*) - SOUTH DAKOTA - Scattered infestation in western area wheat. Considerable damage in Haakon County. (Hantsbarger).

A LEAFHOPPER - TEXAS - Caused some damage to rice in Jefferson County. (Hawkins).

RICE WATER WEEVIL (*Lissorhoptrus oryzophilus*) - TEXAS - First generation pupating in rice fields in Beaumont area, Jefferson County. (Hawkins).

SOUTHWESTERN CORN BORER (*Zeadiatraea grandiosella*) - NEW MEXICO - Heavy in sweet corn at Ft. Sumner, De Baca County. (N. M. Coop. Rpt.).

ALFALFA WEEVIL (*Hypera postica*) - NEBRASKA - Larvae damaged alfalfa in Scotts Bluff, Banner, Morrill and Cheyenne Counties. Averaged 80 larvae and 8 adults per 100 sweeps. (Andersen). MARYLAND - Adults light to moderate on alfalfa, Frederick County. (U. Md., Ent. Dept.).

CABBAGE LOOPER (*Trichoplusia ni*) - DELAWARE - In alfalfa in New Castle County and one red clover field in central Sussex County. (MacCreary, Conrad).

LYGUS BUGS (*Lygus* spp.) - WYOMING - Averaged 17 per 50 sweeps at Torrington, Goshen County, and 48 per 40 sweeps at Riverton, Fremont County, in alfalfa. (Davison). DELAWARE - *L. lineolaris* nymphs numerous in alfalfa, western Kent County, adults quite numerous in same crop, southern Sussex County. *Lygus* spp. quite common in alfalfa statewide. (MacCreary, Conrad). NEW MEXICO - Damaged seed alfalfa, Chaves and Eddy Counties. (N. M. Coop. Rpt.). IDAHO - Extremely abundant in alfalfa seed fields north of Bonners Ferry and western Franklin County. Considerable damage in latter area. (Gittins, Roberts). SOUTH DAKOTA - Abundant in scattered alfalfa fields in eastern and south central areas, up to 50 per 10 sweeps. (Hantsbarger).

MEADOW SPITTLEBUG (*Philaenus leucophthalmus*) - IOWA - Abundant in corn fields and in oats in Clayton County and in a nursery at Charles City. (Iowa Ins. Inf.). CALIFORNIA - Light in sweetclover in Pepperwood area, Humboldt County. (Cal. Coop. Rpt.). ILLINOIS - Adults averaged 1,300 per 100 sweeps in northwest alfalfa and clover, 1,075 in northeast. (Ill. Ins. Rpt.). OHIO - Mostly adults. In typical unsprayed fields adult population dropped from 29.3 per sweep on June 18 to 9.6 per sweep July 10 on account of dispersal. Highest adult population at Wooster was 178 adults on June 16. (Treece).

PALE-STRIPED FLEA BEETLE (*Systema blanda*) - DELAWARE - Unusually common in red clover, central New Castle County. (MacCreary, Conrad).

PEA APHID (*Macrosiphum pisi*) - NEBRASKA - Declined. Averaged 400 per 100 sweeps in east central Platte Valley, 196 per 100 sweeps in panhandle counties. (Andersen). MARYLAND - Generally light in alfalfa in central counties. (U. Md., Ent. Dept.). OKLAHOMA - Remained very light and scattered in alfalfa throughout State. (Coppock). NEVADA - Heavy one area Nye County. (Parker). ILLINOIS - Northwestern section averaged 1540 per 100 sweeps, southeastern 1172, other sections 300 to 700. (Ill. Ins. Rpt.). IOWA - Abundant in northwest area. (Iowa Ins. Inf.).

POPATO LEAFHOPPER (*Empoasca fabae*) - INDIANA - Unusually low over State. (Wilson). MARYLAND - Increased on alfalfa, particularly in central counties. Up to 12 per sweep on Frederick County alfalfa. (U. Md., Ent. Dept.). DELAWARE - Marked increase in adults and nymphs on alfalfa and clover throughout State. (MacCreary, Conrad). WISCONSIN - Populations very low in northeastern alfalfa, never exceeding 5 per 100 sweeps. (Wis. Coop. Sur.). OHIO - Remains low in northeastern area. Less than 0.5 adult in most fields. (Treece). ILLINOIS - Adults 100 to 200 per 100 sweeps in all sections. Nymphs 3 to 83 per 100 sweeps. (Ill. Ins. Rpt.). IOWA - Small numbers, 5-6 per 10 sweeps, in alfalfa. (Iowa Ins. Inf.).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - NEBRASKA - Few found in McCook area, Red Willow County. First report for 1958. (Hill). ARIZONA - Damaged 20 acres of alfalfa in Pinal County. (Mendenhall). OKLAHOMA - Low in all sections throughout State. Counts in southern counties ranged 5-40 per 10 sweeps. (Coppock). NEW MEXICO - Several heavy infestations in alfalfa, Chaves and Eddy Counties. (N. M. Coop. Rpt.). NEVADA - Scattered and light in Esmeralda County. (Bechtel). ILLINOIS - None found. (Ill. Ins. Rpt.).

STINK BUGS - UTAH - *Chlorochroa sayi* damaged some seed alfalfa in Delta area, Millard County. Some control being applied. Averaged 2-4 per sweep in some seed alfalfa fields. (Knowlton). NEW MEXICO - Moderate to heavy; damaged seed alfalfa in Chaves and Lea Counties. (N. M. Coop. Rpt.). NEVADA - *C. sayi* becoming more numerous in grain in areas of Esmeralda County. (Bechtel).

THREE-CORNERED ALFALFA HOPPER (*Spissistilus festinus*) - NEW MEXICO - Averaged 6-14 adults per 100 sweeps in alfalfa at Portales, Roosevelt County. (N. M. Coop. Rpt.).

BEAN LEAF BEETLE (*Cerotoma trifurcata*) - MARYLAND - Caused light to moderate damage to soybeans, Wicomico and Dorchester Counties. (U. Md., Ent. Dept.).

JAPANESE BEETLE (*Popillia japonica*) - DELAWARE - Increased on soybeans, red clover and corn statewide. Caused moderate damage to soybeans in several fields, Kent and Sussex Counties. (MacCreary, Conrad).

WESTERN YELLOW-STRIPED ARMYWORM (*Prodenia praeifica*) - CALIFORNIA - Heavy infestations on soybeans in Lakeport area of Lake County. (Cal. Coop. Rpt.).

BELLA MOTH (*Utetheisa bella*) - ALABAMA - Adults prevalent on peanuts in southeast section. (Eden).

FALSE CHINCH BUGS - IDAHO - *Nysius ericae* mass migrations still occurring in Twin Falls area. Species previously reported as unidentified. (T. F. F. S.). UTAH - Very abundant on farms and rangeland over State, much above normal. (Knowlton).

A SPITTLEBUG (*Lepyronia quadrangularis*) - TENNESSEE - Abundant on Johnson grass middle of June at Brentwood Hall, Nashville area. First report of species from Tennessee. Det. L. M. Russell. (Bruer).

WESTERN HARVESTER ANT (*Pogonomyrmex occidentalis*) - NEW MEXICO - Active on rangeland in Union, Harding and San Miguel Counties. (N. M. Coop. Rpt.).

FRUIT INSECTS

EUROPEAN RED MITE (Panonychus ulmi) - PENNSYLVANIA - Populations increasing on apple in south central area. (Pepper). DELAWARE - Increasing on apples in southern Sussex County. (Kelsey). OHIO - Populations increasing. (Cutright). INDIANA - Increased rapidly in Vincennes area, where controls allowed to lapse. Bronzing of apple in some instances. Continued as predominant species of orchard mites in the area. (Hamilton). UTAH - A serious outbreak at Providence in apple orchard. This species rarely abundant this season to July 8. (Knowlton).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - MICHIGAN - Numerous in orchard ground cover. (Hutson). PENNSYLVANIA - Increasing on apple in south central area. (Pepper). COLORADO - Building up on apple and peaches in Mesa and Delta Counties. (Exp. Sta.).

MITES - ILLINOIS - Tetranychus schoenei and/or T. canadensis in small areas, many orchards, Carbondale area. One population reached more than 40 per leaf on apples. (Meyer). INDIANA - Tetranychus spp. increased most rapidly on apples where not controlled in Orleans area. (Marshall). CALIFORNIA - Bryobia praetiosa complex heavy on apple trees in Anza area, Riverside County and medium in Petrolia area, Humboldt County. Eriophyes vitis heavy on grapes in Placerville, El Dorado County. (Cal. Coop. Rpt.). MISSISSIPPI - Panonychus citri moderate on citrus in Jackson County. (Colmer). NEW MEXICO - Bryobia praetiosa complex still a problem in several orchards in Otero, Lincoln and De Baca Counties. Tetranychus sp. building up on apple foliage at Ft. Sumner, De Baca County. Causing some browning of foliage. (N. M. Coop. Rpt.).

CODLING MOTH (Carpocapsa pomonella) - PENNSYLVANIA - Moths of first and second generation present in south central area. Larvae entering apples in greater numbers than in several years. (Pepper). DELAWARE - Adult emergence began July 7 from larval-infested apples collected June 19 in New Castle County. (MacCreary, Conrad). NEW JERSEY - Activity very low. (Ins. Dis. News1.). MASSACHUSETTS - First brood through egg laying and hatching in most orchards in Amherst area. (Crop. Pest Cont. Mess.). WEST VIRGINIA - Fruit in tops of apple trees being damaged in Berkeley and Jefferson Counties. (W. Va. Ins. Sur.). OHIO - Marked increase in activity June 30-July 10. First larvae leaving apples, July 6. (Cutright). INDIANA - First larvae of summer brood have hatched at Orleans. (Marshall). First-brood moths emerged at Vincennes July 2. Second-brood entries will occur in orchards about July 10. (Hamilton). ILLINOIS - First second-generation moths observed June 29 at Carbondale. Three to four-day old larvae in apples July 8. (Meyer). WISCONSIN - Light to moderate populations of pupae, adults and eggs, oviposition continuing in Door County, week ending June 28. (Wis. Coop. Sur.). MISSOURI - Much activity in most of State. Effect of control of second brood will soon be apparent. (Wkly. Rpt. Fr. Grs.). UTAH - Some damage in Washington County. (Knowlton). COLORADO - Second brood expected week of July 8 in Garfield County. (Exp. Sta.).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - ILLINOIS - Apparently no threat of economic damage developing in Carbondale area, although moths are still present in orchards. Threat may exist where late first brood was numerous. (Meyer). VIRGINIA - Generally prevalent on water sprouts in some northern apple orchards but no commercial damage to July 11 but potential for damage is present. (Hough). MICHIGAN - Second brood hatching at Coloma and Sodus, July 8. (Hutson). PENNSYLVANIA - Moths, eggs and newly-hatched larvae on apple in south central area. (Pepper).

A FLEA BEETLE (Altica sp.) - NEW MEXICO - Defoliating young apple trees at Hillsboro, Sierra County, and in Dona Ana County. (N. M. Coop. Rpt.).

APPLE APHID (Aphis pomi) - COLORADO - Noticeably heavy populations in areas of Delta County. Control not very successful. (Exp. Sta.). MICHIGAN - Building up at Sodus and Coloma. (Hutson). VIRGINIA - Prevalent on tender terminals

and water sprouts in few apple orchards in northern area but no damage to July 11. (Hough). PENNSYLVANIA - In large numbers on watersprouts of apple in south central area. (Pepper). NEW JERSEY - Few present. (Ins. Dis. Newsl.).

APPLE MAGGOT (*Rhagoletis pomonella*) - MINNESOTA - Flies emerged at Preston and LaCrescent, July 4 and in Twin City area, July 8. (Minn. Ins. Rpt.). OHIO - First flies in cage July 4, in traps July 5. (Cutright).

LESSER APPLEWORM (*Grapholitha prunivora*) - CALIFORNIA - Medium on peach in Escondido area of San Diego County. (Cal. Coop. Rpt.).

PLUM CURCULIO (*Conotrachelus nenuphar*) - GA. - Mid-season varieties of peaches now moving, as well as late varieties. May be subjected to second-brood larvae. No complaints of curculio damage to early varieties. (Snapp). ILLINOIS - Weather very favorable for second-brood development at Carbondale. (Meyer). WISCONSIN - Adults, eggs and larvae light to moderate in apple and cherry orchards, Door County, week ending June 28. (Wis. Coop. Sur.). MICHIGAN - Few adults attacking fruit. (Hutson).

WALNUT CATERPILLAR (*Datana integerrima*) - TEXAS - Second generation heavy on pecans in Dewitt, Gonzales, Guadalupe and Caldwell Counties. (Garner).

A WASP MOTH (*Lymire edwardsii*) - FLORIDA - Larvae averaged hundreds per fig tree of 20 checked at Homstead, Dade County. Host plants occasionally completely defoliated. (Fla. Coop. Sur.).

WESTERN CHERRY FRUIT FLY (*Rhagoletis cingulata indifferens*) - IDAHO - Infesting backyard cherry trees in Nampa. This is first record of the species in Canyon County. Of 3 trees examined, 25-30 percent of cherries had larvae. (Scott, Bechtolt, Hart).

FALL WEBWORM (*Hyphantria cunea*) - ALABAMA - Reported from almost all areas of State. Infestation much heavier on fruit than at same season in 1957. (Pearson, Grimes). OKLAHOMA - Light, scattered infestations on fruit in some south central and eastern counties. (Coppock).

GRAPE ROOTWORM (*Fidia viticida*) - ALABAMA - First adult of year collected in Butler County, week ending July 5. (Grimes).

SHOT-HOLE BORER (*Scolytus rugulosus*) - NEW MEXICO - Killing peach and cherry trees in De Baca County. (N. M. Coop. Rpt.).

SCALE INSECTS - CALIFORNIA - Medium infestation of *Aonidiella citrina* on orange trees in Orland, Glenn County. *Lepidosaphes ulmi* heavy on apples at San Francisco. *Lecanium corni* complex heavy on peach trees, Chico area of Butte County. (Cal. Coop. Rpt.).

CITRUS WHITEFLY (*Dialeurodes citri*) - MISSISSIPPI - Damaging citrus in Jackson County. (Colmer).

Citrus Insect Situation, Lake Alfred, Florida, for First Week in July - FLORIDA - PURPLE SCALE activity increased and peak expected about mid-July. FLORIDA RED SCALE declined but sharp increase expected during mid-July. CITRUS RUST MITE increased and expected to increase through July. MEALYBUG infestations on increase. (Pratt, Thompson, Johnson).

GRAPE FLEA BEETLE (*Altica chalybea*) - TENNESSEE - Outbreak in Sevier and Cocke Counties. (Mullett).

TRUCK CROP INSECTS

BET LEAFHOPPER (*Circulifer tenellus*) - UTAH - Curly top loss of tomato plants continues to mount throughout State. Insect extremely numerous on several truck crops. (Knowlton). IDAHO - In extremely large numbers, mostly in nymphal stage, in sugar beet fields near western edge of Twin Falls irrigated tract. Estimates of nymphs from 50-150 per square foot. Incidence of curly top in sugar beets throughout much of south central and southeastern areas far above normal. (T.F.F.S., Fenwick). Control now completed on 3,300 acres of leafhopper breeding areas in eastern Idaho. (Evans). The incidence of curly top on sugar beets and tomatoes is highest reported from Franklin County in the last 10 years. (Roberts). COLORADO - Curly top and leafhoppers in western and eastern areas. In Mesa County some gardens and commercial plantings of tomatoes with 100 percent infection. Leafhoppers 50-100 per 100 sweeps in Garfield County, 100-200 in Mesa County and numerous in Montrose County. Incidence of curly top less than 5 percent along foothills in Larimer and Boulder Counties. (Exp. Sta.).

BET WEBWORM (*Loxostege sticticalis*) - MINNESOTA - Heavy moth populations in beet fields in northwest district. Some larval control in west Polk County. (Minn. Ins. Rpt.). NEBRASKA - Very light in Scotts Bluff, Morrill and Keith Counties. Counts average 12 larvae per 100 sweeps. (Andersen). WYOMING - No larvae reported or observed in Laramie, Goshen, Niobrara or Platte Counties. Very few adults; this is in contrast to situation end of June. (Davison).

POTATO PSYLLID (*Paratrioza cockerelli*) - UTAH - Occasional ones taken on potatoes, Davis County. (Knowlton). WYOMING - Populations in Cheyenne area increased markedly. Average of 55 psyllids per 50 sweeps on matrimonyvine. Population decreased in Pine Bluffs area, with average of 10 per 50 sweeps on same host. Average of 4 per 100 sweeps on early potatoes in Goshen County. (Davison). The fifth potato psyllid survey was conducted week of July 7. Low populations indicated throughout area. Scottsbluff, NEBRASKA, area averaged 25.4 psyllids per 100 sweeps. Green River, WYOMING, averaged 0.4 and Laramie 4.08. Ault-Greeley, COLORADO, area averaged 29.7 and Pueblo-La Junta 10.5. West of the mountains at Grand Junction only a trace and Provo-Logan area averaged 1.64. Cool temperature and continued rains throughout the region probably account for reduced populations. (PPC).

POTATO FLEA BEETLE (*Epitrix cucumeris*) - MINNESOTA - Some spraying in Red River Valley. (Minn. Ins. Rpt.). DELAWARE - Moderate damage to potatoes in New Castle and central Kent Counties. (MacCreary, Conrad).

POTATO LEAFHOPPER (*Empoasca fabae*) - INDIANA - Populations on beans and potatoes low. (Gould). DELAWARE - Prevalent on potatoes in New Castle County. (MacCreary, Conrad). MARYLAND - Increasing on beans in most sections. Control may be needed. (U. Md., Ent. Dept.).

HORNWORMS (*Protoparce* spp.) - NEW MEXICO - Damaging tomatoes in Luna and Lea Counties. Also problem in home gardens throughout State. (N. M. Coop. Rpt.). VIRGINIA - Light on tomatoes in scattered fields of Northumberland County. Control by airplane spraying some areas. (Saville).

TOMATO FRUITWORM (*Heliothis zea*) - ALABAMA - Light damage to tomatoes in central and northern areas. (Grimes). DELAWARE - Moderate damage to tomato fruit in Sussex County and light feeding on foliage in Kent County. (MacCreary, Conrad).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - DELAWARE - Adults common in potato fields in New Castle and Kent Counties. Bird predators active on borer-infested potato stalks. (MacCreary, Conrad). MARYLAND - Larvae beginning to show up in peppers in Worcester County. Growers concerned. (U. Md., Ent. Dept.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - UTAH - Damage increasing in Salt Lake, Weber, Cache and Box Elder Counties. (Knowlton). COLORADO - Adults low in 4 counties. Not as serious to July 8 as in 1957. (Exp. Sta.). WYOMING - Averaged 4 per 50 sweeps in Goshen County. (Davison). NEBRASKA - Light in some fields of beans in Scotts Bluff and Morrill Counties. Counts average 5 adults and larvae per 100 sweeps. (Andersen). ALABAMA - Moderate on beans in Cherokee County. (Grimes). DELAWARE - Heavy damage to beans in Sussex County. (MacCreary, Conrad). MARYLAND - Heavy damage to unprotected snap beans in Anne Arundel County. (U. Md., Ent. Dept.).

BEAN LEAF BEETLE (Cerotoma trifurcata) - ALABAMA - Heavy infestations of field peas in DeKalb and Cherokee Counties. Up to one-half of the foliage destroyed on some plants. (Grimes). TEXAS - Heavy on beans in Tyler County. (Hawkins).

GREEN CLOVERWORM (Plathypena scabra) - DELAWARE - Common on lima beans in Sussex County. (MacCreary, Conrad).

PEA APHID (Macrosiphum pisi) - WISCONSIN - Counts in peas mostly low but some scattered fields with higher populations probably will need treatment. Marked drop in aphid counts appears to be due to disease. (Wis. Coop. Sur.). UTAH - Generally scarce in peas and alfalfa in 7 counties. (Knowlton).

HARLEQUIN BUG (Murgantia histrionica) - NEW MEXICO - Considerable damage to cabbage in Lea County. (N. M. Coop. Rpt.). COLORADO - Damaging number on cabbage, kohlrabi and horseradish from Genoa, Lincoln County. (Exp. Sta.).

CABBAGEWORMS - VIRGINIA - Trichoplusia ni and Pieris rapae on increase on cabbage and cole crops in eastern area. (Hofmaster). IOWA - Cabbage loopers abundant. (Iowa Ins. Inf.). MARYLAND - P. rapae severe on untreated crucifers in central counties. (U. Md., Ent. Dept.).

STINK BUGS - NEW MEXICO - Severely damaged cabbage in Lea County. (N. M. Coop. Rpt.). TEXAS - Chlorochroa ligata medium on peas in Dimmit and Frio Counties. (Harding). Stink bug, species unknown, heavy on peas, melons and tomatoes in Anderson and Jefferson Counties and infesting beans in Tyler County. (Hawkins).

FLEA BEETLES (Phyllotreta spp.) - MARYLAND - Heavy on crucifers in western Baltimore County. (U. Md., Ent. Dept.).

PEPPER MAGGOT (Zonosemata electa) - NORTH CAROLINA - Adult taken in light trap at Faison. (Farrier).

BLISTER BEETLES - ALABAMA - Epicauta sp. moderate on pimiento peppers in Chambers County. A large number of plants damaged. (Grimes). NEW MEXICO - Damaging vegetable crops at Lovington, Lea County. (N. M. Coop. Rpt.).

CUTWORMS - OREGON - Abundant on truck crops, gardens and flower beds in Willamette Valley. Predominantly Peridroma margaritosa and Agrotis ypsilon. (Crowell, Every, July 3). VIRGINIA - A. ypsilon and P. margaritosa damaging newly-planted peppers and sweetpotatoes, at Painter, Accomack County. (Hofmaster).

ONION THRIPS (Thrips tabaci) - UTAH - Damage becoming common in central and northern areas. (Knowlton). COLORADO - Ranging 20-30 per plant in Montrose County. Some infestation appearing. (Exp. Sta.).

A LOOPER (Rachiplusia ou) - INDIANA - Small numbers on peppermint and spearmint in northern area. Control necessary some cases. Many larvae killed by a virus. (Gould).

JAPANESE BEETLE (*Popillia japonica*) - DELAWARE - Very common on asparagus ferns in Kent and New Castle Counties. Common cucumbers, peppers and lima beans in central Sussex County though no damage apparent. (MacCreary, Conrad). WEST VIRGINIA - Damaging ripe raspberries and foliage of grape, Randolph County. (W. Va. Ins. Sur.).

Lepidopterous Larvae in Sweetpotatoes in Louisiana - Some fields in St. Landry Parish heavily infested with *Loxostege similalis*, *Laphygma frugiperda* and *Prodenia ornithogalli*. All of the above-ground portions of plant destroyed in some fields. (Spink).

ALFALFA LOOPER (*Autographa californica*) - IDAHO - Light damage generally to mint fields in northern Kootenai Valley area of Boundary County. (Gittins).

ASPARAGUS BEETLE (*Crioceris asparagi*) - DELAWARE - Larvae quite prevalent on asparagus ferns in central Kent County. (MacCreary, Conrad).

CYCLAMEN MITE (*Steneotarsonemus pallidus*) - MINNESOTA - Higher incidence of mites on strawberries since 1955 on university plots. Considerable plant injury and nubbin production. (Minn. Ins. Rpt.).

APHIDS - PENNSYLVANIA - Heavy infestations of *Amphorophora rubi* on *Rubus* sp. in York, Lancaster and Adams Counties. (Negley). MAINE - Increased on untreated potatoes at Aroostook Farm. *Aphis abbreviata* predominates. (Shands).

TOBACCO INSECTS

GREEN PEACH APHID (*Myzus persicae*) - MARYLAND - Increased on top leaves of tobacco in several counties. (U. Md., Ent. Dept.). VIRGINIA - Light to medium on tobacco in some fields, Pittsylvania County. Generally spotted through most fields. (Dominick).

HORNWORMS (*Protoparce* spp.) - MARYLAND - Light to moderate on tobacco in Prince Georges and St. Marys Counties. No heavy infestations seen to July 14. (U. Md., Ent. Dept.).

TOBACCO FLEA BEETLE (*Epitrix hirtipennis*) - MARYLAND - Injury to lower leaves noticeable on most tobacco. (U. Md., Ent. Dept.).

COTTON INSECTS

BOLL WEEVIL (*Anthonomus grandis*) - LOUISIANA - Five fields Tensas Parish ranged 2-25 percent infested averaged 11 percent. One field Franklin Parish averaged 6 percent infestation. (Spink). Seventy-one fields in Madison Parish checked by Tallulah station personnel showed 58 to be infested. Forty-five had been treated and had an average infestation of 2 percent, 26 untreated had an average infestation of 9 percent. (Smith et al.). ARKANSAS - Light emergence first-generation weevils in early cotton southwest area. (Ark. Ins. Rpt.). ALABAMA - Infestations in northeast much less than for same period last year. Spot checks in 6 northeast counties ranged from 0 to 40 percent infestations. (Grimes). NORTH CAROLINA - Remains light. First-generation emergence expected to be well underway by July 18. (Cott. News Lett.). TENNESSEE - Forty of 84 fields examined in west Tennessee found infested. Average infestation 4 percent, compared with 18 percent same period last season. First-generation emergence expected by July 18. Some treatment underway in infested fields. (Locke). MISSISSIPPI - First-generation hatch continues light in delta counties. Infestation range 0-7 percent in fields examined. (Merkel et al.).

SOUTH CAROLINA - Infestation climbed slightly during week. First-generation emergence underway. Fifty treated fields Darlington area had less than one percent infestation. Most fields under 3 but two examined with 8 percent infestation. (Cott. Lett. and Fye et al.). OKLAHOMA - Very light square infestations in Bryan, Johnston, and Marshall Counties. Up to 3 percent infestation. (Coppock).

BOLLWORMS (*Heliothis* spp. et al.) - ARKANSAS - Moths emerging in numbers, some fields eggs counts have taken a sharp rise. Beneficial insects doing excellent job of destroying eggs and larvae. (Ark. Ins. Rpt.). ALABAMA - Infestations ranged from light to heavy in northeast area, however majority of counties had light infestations. (Grimes). NORTH CAROLINA - Severe damage to a few fields in lower southeast area. (Cott. News Lett.). MISSISSIPPI - Light egg deposition on cotton in delta counties. (Merkl et al.). SOUTH CAROLINA - Eggs and small larvae numerous in many fields. (Cott. Lett.). LOUISIANA - Sixty-seven of 71 fields examined in Madison Parish were found infested with average square infestation of 5 percent. Terminals examined in 30 fields and an average of 10.77 eggs and 2.93 larvae per 100 terminals found. (Smith et al.). NEW MEXICO - *H. zea* beginning to feed on cotton terminals in Eddy and Lea Counties. Eggs light to moderate most areas. (N. M. Coop. Rpt.).

PINK BOLLWORM (*Pectinophora gossypiella*) - ARIZONA - Moderately heavy infestation found in limited area of southwestern Maricopa County. This is the first pink bollworm found in Maricopa County since 1947. (Mendenhall).

SPIDER MITES - ARKANSAS - Populations continue to increase, controls may be needed some spots (Ark. Ins. Rpt.). ALABAMA - Causing trouble in localized northern areas. Damaging cotton in Randolph County. (Grimes). MISSISSIPPI - Infestations spotted in delta area, treatments required in three fields inspected. (Merkl et al.). SOUTH CAROLINA - Becoming established in some fields of Coastal Plain and Piedmont areas. (Cott. Lett.)

LYGUS BUGS - ARIZONA - Building up in cotton in Pinal County. Fifteen thousand acres treated. (Mendenhall). TENNESSEE - Numbers increasing and causing considerable shedding of squares. Controls needed in many fields. (Locke). MISSISSIPPI - *Lygus lineolaris* generally lighter than last week but controls still needed some delta fields. (Merkl et al.). LOUISIANA - *L. lineolaris* still abundant in untreated Madison Parish fields. (Smith et al.). NEW MEXICO - Major problem in many fields of Dona Ana, Luna, Chaves, Lea and Eddy Counties. (N. M. Coop. Rpt.).

COTTON LEAFWORM (*Alabama argillacea*) - ARIZONA - Two found on cotton in Deer Valley. (Bottger et al.). ARKANSAS - Found in Lonoke County. (Ark. Ins. Rpt.).

CABBAGE LOOPER (*Trichoplusia ni*) - NEW MEXICO - Larvae generally light in most areas, eggs very numerous in several fields in Roosevelt County. (N. M. Coop. Rpt.).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - TENNESSEE - One stalk of cotton found to be infested in McNairy County. (Locke).

COTTON LEAF PERFORATOR (*Bucculatrix thurberiella*) - ARIZONA - Building up on cotton in Pinal County. (Mendenhall).

FLEAHOPPERS - ARIZONA - Building up in Pinal County. (Mendenhall). ALABAMA - *Psallus seriatus* causing light damage in northeast area. (Grimes). SOUTH CAROLINA - Continue to cause damage to untreated cotton in Piedmont Counties. (Cott. Lett.). NEW MEXICO - Light to moderate infestations found most areas, causing some shedding of squares and bolls. (N. M. Coop. Rpt.).

A LEAF BEETLE (*Colaspis* sp.) - MISSISSIPPI - Feeding on cotton in DeSota County July 10. (Hutchins).

Cotton Insect Situation, Texas - THRIPS light in all areas reporting activity. FLEAHOPPERS light to heavy, heaviest in central, north central and northeast areas. BOLLWORMS increased egg deposition in most areas of the State. BOLL WEEVILS still a problem in northeast, east, central, south central, upper coastal and coastal bend areas. GRASSHOPPERS heavy in northwest and north central areas. Other pests reported doing some damage were false chinch bugs, lygus bugs, spider mites, leafworms, cabbage loopers, square borers and pink bollworms. (Gaines).

ADDITIONAL NOTES

DELAWARE - Small larvae of CORN EARWORM on soybeans in some fields in New Castle and Sussex Counties. Very common in field corn, Sussex County. GRASSHOPPERS, primarily *Melanoplus femur-rubrum* and *Dissosteira carolina*, very common on soybeans, southwestern Sussex County. SOUTHERN CORNSTALK BORER in field corn in southeastern Sussex County and CORN LEAF APHID starting small colonies in whorls in central part of county. (MacCreary, Conrad).

NEW MEXICO - GRASSHOPPERS heavy on alfalfa in some areas of Curry, Roosevelt and Lea Counties. (N. M. Coop. Rpt.).

MASSACHUSETTS - First-brood EUROPEAN CORN BORER egg-laying and hatching complete. No CORN EARWORM found as yet, but small numbers expected in early and mid-season corn in southern Connecticut Valley and southeastern area of State. (Wheeler).

KANSAS - GRASSHOPPERS - Counts ranged 20-36 per square yard in Morton County, with *Phlebotoma quadrimaculatum* dominant. Total of 88,000 acres of government rangeland being sprayed, about 20 percent completed. (Plant Pest Cont.). About 10 specimens of *Dissosteira longipennis* from range in northwest Morton County. These have not been reported from Kansas for several years. In south central area counts ranged 12-36 per square yard. *Melanoplus bivittatus* and *M. differentialis* dominant crop species. Stripping corn and alfalfa locally along field margins, central and south central areas. SPOTTED ALFALFA APHID in low numbers in few alfalfa fields, Sedgwick County. None found in other counties to west. (Matthew).

NEBRASKA - ALFALFA WEEVIL larvae causing light damage to alfalfa in Scotts Bluff, Banner, Morrill and Cheyenne Counties. Larval counts average 80 per 100 sweeps and adults 8 per 100 sweeps. (Andersen). SPOTTED ALFALFA APHID - Few found in the McCook, Red Willow County area. First report of this pest for this year. (Hill). PEA APHID - Declined. Averaged 400 per 100 sweeps in the east central Platte Valley. In the panhandle, averaged 196 per 100 sweeps. (Andersen).

OREGON - GREEN PEACH APHID adults and nymphs abundant enough to warrant control in certified seed potato acreages over most of Klamath County during late June and early July. (Schuh, Vertrees). CICADAS, (unidentified species), very abundant and damaging branches by oviposition punctures in Wasco County in early July. (Hammond). WESTERN SPOTTED CUCUMBER BEETLE, high populations on a variety of crops and flowers in the Willamette Valley. Damage to beans especially noticeable. (Capizzi). BEAN APHID (*Aphis fabae*) building up on beans in the Willamette Valley, July 9. (Morrison). EUROPEAN RED MITE populations building up on apples in the vicinity of Corvallis in early July. POWDER-POST BEETLES (unidentified) causing unusual amount of damage in Clatsop County. (Every). APPLE MEALYBUG eggs hatched and nymphs on foliage in large numbers in filbert orchards near Gervais, July 11. (Jones).

(Continued on page 642)

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

BIRCH LEAF MINER (*Fenusa pusilla*) - INDIANA - Found at South Bend, St. Joseph County, for new State record. (Schuder). WEST VIRGINIA - Caused moderate damage to birch in Preston County. (W. Va. Ins. Sur.).

BLACK TURPENTINE BEETLE (*Dendroctonus terebrans*) - ARKANSAS - Increased activity in central and southern counties during June. Heavy logging equipment appeared responsible for sharp upturn of beetle activity in one instance. Excessive moisture may also be responsible in other instances. (Ark. For. Pest Rpt.).

FALL WEBWORM (*Hyphantria cunea*) - DELAWARE - On persimmon and ash, southeastern Sussex County. (MacCreary, Conrad). FLORIDA - Collected on persimmon in Putnam County, flowering dogwood in Alachua County. Webs frequently conspicuous in central part of State. (Fla. Coop. Sur.). ARKANSAS - Heavy on elm, sweetgum, pecan, walnut and persimmon trees. (Ark. Ins. Rpt.).

IPS BEETLE (*Ips* spp.) - ARKANSAS - Slight increase in activity during June, particularly in central and southern counties. Individual to very small groups of trees affected. (Ark. For. Pest Rpt.).

LOCUST LEAF MINER (*Chalepus dorsalis*) - MARYLAND - Foliage injury to black locust noticeable in central and southern counties. (U. Md., Ent. Dept.).

OAK LACE BUG (*Corythucha arcuata*) - NORTH CAROLINA - Moderate on leaves of white oaks, Anson County. (Barnes, Farrier).

A PINE TIP MOTH - ARKANSAS - Second-brood adult emergence practically ended. Third-brood emergence expected July 8-10. Damage by second-brood larvae appears relatively light. (Ark. For. Pest Rpt.).

POPLAR AND WILLOW BORER (*Sternonchetus lapathi*) - OREGON - Heavy in Benton County on willow, adults emerging July 3. (Capizzi).

SAWFLIES - ARKANSAS - Small infestations of *Neodiprion taedae linearis* appeared in early June in Benton and Washington Counties. One short-leaf pine planting in Benton County was treated with satisfactory results. (Ark. For. Pest Rpt.). PENNSYLVANIA - *Pristiphora erichsonii* caused severe defoliation of Japanese larch for fifth season, Clinton County. (Drooz). TEXAS - Heavy defoliation of natural reproduction and planted loblolly and slash pines by *Neodiprion lecontei* recently reported from many eastern locations. Fairly heavy mortality of trees defoliated in 1957 noted in plantations. Several sprayed to prevent further spread and repeated defoliation. (So. For. Pest Rpt.). LOUISIANA - Heavy defoliation of pines recently reported in southwestern part of State. (So. For. Pest Rpt.). MICHIGAN - *N. lecontei* hatching at Gaylord, Ostego, Cadillac and Ellsworth. (Hutson).

SOUTHERN PINE BEETLE (*Dendroctonus frontalis*) - NORTH CAROLINA - Area survey indicates spot killing of pine in eastern quarter of Tyrrell County and north-eastern Hyde County. Spot vary from few trees to half an acre. (Green).

SPRUCE BUDWORM (*Choristoneura fumiferana*) - MAINE - Approximately 300,000 acres aerial sprayed in northeastern Aroostook County June 10-20. Balsam fir and spruce in this area had undergone 5-9 years light to severe defoliation. Egg-mass surveys in 1957 indicated heavy populations would be present in 1958. (Northeast For. Pest Rpt.).

TWIG PRUNER (*Elaphidion villosum*) - PENNSYLVANIA - Caused considerable twig drop on a number of oaks in Juniata County, more noticeable along highways in Huntingdon County. (Udine).

WHITE-PINE WEEVIL (*Pissodes strobi*) - VIRGINIA - Heavily damaged about 100 white pines in Roanoke. (Evans, Morris).

ZIMMERMAN PINE MOTH (*Dioryctria zimmermani*) - INDIANA - Final instar at LaPorte. Infestation as high as 35 percent in untreated areas of Scotch pine. (Schuder).

ASIATIC GARDEN BEETLE (*Autoserica castanea*) - WEST VIRGINIA - Moderate on chrysanthemum, Kanawha County. (W. Va. Ins. Sur.).

JAPANESE BEETLE (*Popillia japonica*) - RHODE ISLAND - First specimens seen on sassafras at Kingston July 1. Adults at Cranston. (Kerr, Howard, Mathewson). PENNSYLVANIA - First specimens observed in York and Perry Counties. (Negley). Adults fairly common in south central area (Pepper) and common in southwestern area, but appears less so than in 1957. (Udine). MARYLAND - Caused considerable concern in suburban areas, feeding on roses and other ornamentals. (U. Md., Ent. Dept.). VIRGINIA - Continued to feed upon many ornamentals, garden and field crops, fruit trees and wild host plants in various parts of State. Reports received from Norfolk, Roanoke, Henry, Montgomery and Dinwiddie Counties. Light infestation present along northern end of Blue Ridge Parkway. (Morris, et al.). INDIANA - Scarce to July 12 in Newton County. In area heavily infested in 1957 none seen on soybeans, only one on smartweed. Only 29 collected in 4 traps near the 1957 heavily infested field in 7 days. First beetle found July 2, week later than in 1957. (Gould).

ROSE CHAFER (*Macrodactylus subspinosus*) - WEST VIRGINIA - Caused moderate injury to sassafras, rose, peach and blackberry, Randolph and Preston counties. (W. Va. Ins. Sur.).

BAGWORM (*Thyridopteryx ephemeraeformis*) - NORTH CAROLINA - Numerous local reports of injury to juniper in Wake, Chatham and Halifax Counties. (Farrier, Jones). MISSOURI - Becoming increasingly troublesome in northwest section. (Kyd, Thomas).

ELM LEAF BEETLE (*Galerucella xanthomelaena*) - MISSOURI - Moderate to heavy leaf feeding by second-generation larvae over wide area of southern half of State. (Kyd, Thomas). VIRGINIA - Damaged foliage of some elms in Norfolk County (Thomas) and in Amelia County (Rowell, Holmes). OREGON - Damage generally abundant throughout State. Damage to foliage appeared about 2 weeks earlier than for past several seasons. (Capizzi).

LEAFHOPPERS - NEW MEXICO - Severely damaged elm foliage, dahlias and peonies at Lovington, Lea County. (N. M. Coop. Rpt.).

MIMOSA WEBWORM (*Homadaula albizziae*) - DELAWARE - Feeding conspicuous on mimosa and honeylocust statewide. (MacCreary, Conrad).

SMALLER EUROPEAN ELM BARK BEETLE (*Scolytus multistriatus*) - WISCONSIN - Dutch elm disease increased to a total of 269 trees, located in 3 southeastern counties, including Jefferson County which had no cases until July 2. (Wis. Coop. Sur.). INDIANA - Caused elm twigs to drop and is annoying in homes throughout State. (Lehker).

PAINTED-LADY (*Vanessa cardui*) - IDAHO - Newly emerged adults extremely abundant in most areas of northern counties. Canadian thistle shows various degrees of defoliation in most areas. Larvae caused general light injury to ornamental gardens. (Gittins). CALIFORNIA - Light on Canadian thistle in Pepperwood, Humboldt County. No longer bothersome in other areas of State. (Cal. Coop. Rpt.).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - IDAHO - Extremely abundant in Kootenai River Valley of Boundary County. Serious annoyance to people and domestic animals in the area. (Gittins). NEVADA - Heavy populations of adult *Aedes* spp. in Smoky Valley, Nye County. (Parker, July 4). UTAH - Annoying in many local areas of Box Elder, Cache and Millard Counties. (Knowlton). MINNESOTA - Heavy hatch of *Aedes vexans* on July 9 and 10. (Minn. Ins. Rpt.). IOWA - Major problem in most of State. (Iowa Ins. Inf.).

HORN FLY (*Siphona irritans*) - NEVADA - Heavy populations in northern Nye County. (Galloway, July 4). NEW MEXICO - Moderate to heavy on cattle in Harding and Union Counties. (N. M. Coop. Rpt.). UTAH - Generally troublesome throughout Washington and Kane Counties. (Knowlton). ALABAMA - Populations decreased to some extent on cattle in Wilcox County. (Hays).

FLIES - WISCONSIN - In a total of 181 barns checked in 13 counties for week of July 4, flies numerous in over half of 64 barns. (Wis. Coop. Sur.). UTAH - House flies seriously annoying in some parts of Kane, Emery and Washington Counties. (Knowlton). NORTH CAROLINA - *Tabanus* sp. causing concern in Graham County. (Wood, Farrier).

CORRECTIONS

CEIR 8(28) : 611 - Under white-fringed beetles change Grapholitha spp. to Graphognathus spp.

CEIR 8(28) : 622 - Labels under male and female should be reversed.

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Protoparce sexta	quinq.	Heliothis zea	vires.
ARKANSAS								
Atkins 6/26-7/9	4	2		2			42	
Fayetteville 6/26-7/9	46	58		49			58	
Hope 6/26-7/2	5	2						
Kelso 6/26-7/9	1	8		5			4	
Morrilton 6/26-7/9	30	36					12	
Stuttgart 6/26-7/9	2	7		3			8	
COLORADO								
Rocky Ford 6/22				642				
FLORIDA								
Gainesville 7/7					3			
Quincy 7/7					17		5	
ILLINOIS								
Urbana 7/3-10	3489	7	4	230				
INDIANA (Counties)								
Orange 6/21-7/8	1732	138	16	133	37	31	5	
Tippecanoe 6/24-7/9	1117	23	26	122		1	1	

LIGHT TRAP COLLECTIONS - Continued

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Protoparce sexta	quinq.	Heliothis zea	vires.
LOUISIANA								
Baton Rouge 7/4-10	1	2	117	1			11	
Franklin 7/2		1	5				1	
Shreveport 7/7	3	4	17	1			27	
MAINE								
Monmouth 7/6-12	36							
Orono 7/6-12	3							
Presque Isle 7/6-12	2							
MISSISSIPPI								
Grenada 6/30-7/5	1	2	3		1		1	
Senatobia 6/26-7/3	1	2					1	
*State College 7/5-11	72	54	1059	1		2	10	25
*Stoneville 7/4-10	68	243	432	9	4	2	98	5
NEBRASKA								
Alliance 6/18-7/1	1530	48		205			4	
Kearney 6/9-7/2	699	25		186	6	13	52	
Lincoln 6/15-7/3	5811	213		211			892	
North Platte 6/13-7/3	15,589	457		2016	11	62	31	
Scotts Bluff 6/10-7/7	674	58		283		2	90	
NORTH CAROLINA								
Clayton 7/10	2		9		9		16	
Faison 7/10	1		32		6	10	11	1
SOUTH CAROLINA								
Charleston 6/30-7/6		1	40		16		2	
Clemson 7/5-11	12	3	85	8	4	7	62	4
Florence 7/6-12	11	4	113	16	46	11	381	32
TENNESSEE (Counties)								
Blount 6/24-7/7	261	76	132	110	7	15	32	
Cumberland	128	59	70	123	5	7	12	
Greene	676	78	54	186	2	8	8	
Johnson	556	249	72	375			6	
Madison	130	28	56	100	4	12	100	
Maury	156	8	19	35		1	15	
Robertson	171	14	4	44		1	3	
TEXAS								
Brownsville 6/30-7/3	1	8		8			96	8

*Two traps - State College; 4 traps - Stoneville.

ADDITIONAL NOTES

NEW YORK - Two RED-BANDED LEAF ROLLER moths in traps, July 11, Rockland County, are first of second brood. CHERRY MAGGOT adults abundant week of July 4 when peak was reached in Columbia County. In same county TWO-SPOTTED SPIDER MITE building up. STRIPED CUCUMBER BEETLE in cucurbit fields and population particularly large in upstate New York, caused substantial feeding injury. MEXICAN BEAN BEETLE larvae found in Ithaca area. Adult population heavier than in 1957 in Monroe County. At Poughkeepsie first JAPANESE BEETLE trapped July 7 and some on corn at Hurley same day. Emergence seems generally late and light. BIRCH LEAF MINER actively feeding. (N. Y. Wkly. Rpt.).

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JULY 25, 1958

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Cooperative
ECONOMIC INSECT
REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GRASSHOPPERS hatching in economic numbers in central Wisconsin, fewer generally than in 1957 in Montana. Heavy in panhandle counties of Nebraska, migrating from field margins. Migrating from rangelands to cultivated crops in California, being heavy in some areas. (p. 645). Control of MORMON CRICKET effective in Utah. (p. 645).

EUROPEAN CORN BORER damaged corn in all parts of Virginia, pupating in central Kentucky. Populations in southwestern Wisconsin higher than earlier egg mass counts indicated. (p. 646). Egg counts high in Alabama. (p. 661).

Damage by CORN EARWORM for 1958 in Alabama worse than in past several years. Counts high in Louisiana, damage severe throughout New Mexico and serious in areas of Utah. (p. 647).

ARMYWORM moth catch high at North Platte, Nebraska. (p. 648).

SPOTTED ALFALFA APHID increased rapidly in western and southwestern Oklahoma. Counts highest for over a year. (p. 650).

BOLLWORMS continue number one pest of cotton in South Carolina. (p. 656).

SPRUCE BUD SCALE reported for first time in California. (p. 658).

ADDITIONAL NOTES. (p. 661).

INSECTS not known to occur in the United States. (p. 663).

WEATHER OF THE WEEK ENDING JULY 21

Cool Canadian air moved into the Great Plains as far south as Kansas at the beginning of the period, and by midweek covered the entire northern half of the Nation east of the Rockies. As the cool Canadian air continued to flow into areas north of the front which extended from Kansas to Virginia, temperatures remained well below normal, averaging as much as 12° below normal for the week at Dubuque, Iowa. Scattered frost occurred in the northern and central lowlands of Wisconsin, with a low of 35° recorded at Danbury on the 16th. Beneficial rains fell in the north central Interior at the beginning of the week, and maintained adequate moisture for crops in most areas. However, topsoil moisture is still short in northeastern Montana and more rain is still needed in the eastern third of South Dakota. In southern areas, that is, south of the frontal zone extending from Kansas to Virginia, typical summertime weather prevailed. Afternoon temperatures generally rose into the 90's and moderate to heavy local thundershowers furnished adequate to abundant moisture except in some sections of the lower Great Plains where heat, drying winds, and growing plants depleted soil moisture at a rapid rate. Rain is needed in the southern plains and parts of the upper coast of Texas, and in all of New Mexico except in eastern portions. Unusually heavy and frequent rainfall occurred along the frontal zone from Kansas eastward to the Appalachians. Weekly totals ranged up to 7 or 8 inches in Missouri and eastern Kansas, and 3 to 5 inches in the Ohio Valley. Many streams from Kansas to southern Indiana are overflowing, including the Missouri River from Kansas City downstream and the mighty Mississippi at points between St. Louis, Missouri, and the mouth of the Ohio.

West of the Continental Divide continued dry weather maintained a high fire hazard in the Pacific Northwest, and lightning set numerous range and forest fires in Oregon and Idaho. In southern desert areas the heat wave of the previous week gradually moderated with temperatures near normal by the 19th and below normal by the 21st when a low of 31° and light frost were reported in the Maverick area of Arizona. Summer rains have begun in southeastern Arizona, and ranges in that area are in good condition but they need rain in the north central and western portions of the State. Temperatures west of the Divide remained below normal most of the time in the Great Basin, with daytime temperatures in the 80's and averages 9° below normal for the week at Elko and Ely, Nevada. The week was relatively warm, however, in extreme southern areas, along the Pacific coast and in Washington. Maxima in eastern Washington at midweek ranged from 95° to 105°. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - MINNESOTA - Low in southeastern district, usually less than one per square yard. Up to 30 per square yard in Faribault and Waseca Counties and westward, with 15 per square yard quite common. Quite low in Rock and Pipestone Counties. Infestations very spotty. Melanoplus femur-rubrum predominant species in southern counties, in first to third instars. Still some hatching. Populations very variable in west central and northwestern districts, 1-27 per square yard in west central, very low in northwest. (Minn. Ins. Rpt.). WISCONSIN - Hatching in economic numbers in lighter soils of central section. Up to 50 M. femur-rubrum nymphs per square yard in Waushara, Waupaca, Marquette and Adams Counties, in surveyed fields with sparse growth where soil temperatures have been high. Averaged 15 per square yard in fields of normal plant growth density. Ranged from first to third instars. Numbers not as high in light soil areas of Green, Rock, Iowa, Richland, Sauk, Columbia, Green Lake and Winnebago Counties. (Wis. Coop. Sur.). SOUTH DAKOTA - Spotty in some areas of north central region, up to 15 nymphs per square yard in alfalfa, 40- per square yard in field margins. M. femur-rubrum dominant species. (Hantsbarger). MONTANA - Appear to be fewer, generally, than in 1957. Scattered infestations in Lake, Sanders, Stillwater, Lewis and Clark, Cascade, Phillips, Blaine and Yellowstone Counties and scattered areas of northeastern part of State. (Roemhild). To July 21, total of 97,562 acres treated under cooperative control program. (PPC). NEBRASKA - M. bilituratus heavy in panhandle counties. Only adults in many areas, indicating migrations have occurred. Third to fourth instar nymphs in some fields, up to 40 per square yard in margins. Light to moderate in wheat. M. bivittatus dominant in south central section, 80 percent adults. Migrations from field margins into corn general, damage to crops evident. Ranged 10-50 per square yard. Late-instar nymphs and adults of M. differentialis in central section ranged 5-40 per square yard, most in field margins. (Roselle, Andersen). Thirty thousand acres treated under cooperative control program to July 21. (PPC). ILLINOIS - Still light, concentrated in field margins, fencerows and ditch banks. Occasional infestations in forage crop fields. (Ill. Ins. Rpt.). OKLAHOMA - Averaged 4-12 per square yard generally in west central and southwestern range areas, somewhat lighter in central area. Averaged 6-20 per square yard in roadsides and margins in former areas. Light to medium damage to margins of cotton, sorghum, corn, legumes and peanuts, often severe to gardens. Second-generation Melanoplus spp. (first and second instars) in several southwestern alfalfa fields. (Coppock). As of July 21 total of 278,583 acres of roadsides, rangeland and idle lands treated under cooperative control program. (PPC). UTAH - Injurious abundant in Mills-Leamington areas of Juab and Millard Counties. Grain and range largely involved. Damaged alfalfa in many Juab County fields. (Knowlton). LOUISIANA - Several species heavily infested pastures in northern parishes. Some treatment applied in Ouachita Parish. (Spink). CALIFORNIA - M. devastator migrating from rangelands into cultivated crops and into houses where they are damaging household goods, Amador County. Mountain populations up to 70-100 per square yard. Hesperotettix sp. medium in the Coalinga area, Fresno County. M. bilituratus light on rangeland in Barstow area of San Bernardino County. (Cal. Coop. Rpt.).

MORMON CRICKET (Anabrus simplex) - UTAH - Control bating covered 24,138 acres in Dry Mesa and Deer Flat areas of San Juan County. Control practically 100 percent effective. Excellent control obtained on 1,220 acres baited in Forshee Mountains, Piute County. Developed light in Government Creek area, Tooele County. Bait to be applied in Jackson Draw, Uintah County. Small infestations southwest of Manila, Dagget County; at Alton, Kane County; and near Enterprise, Washington County. Band discovered in Dagget County, involving 1500 acres south of Dutch John City. (Knowlton, Thornley).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - MASSACHUSETTS - Egg laying and hatching of first brood over. Larvae working in tassels, stalks and ears of early plantings. Egg laying for second brood expected by August 1. (Crop Pest Cont. Mess.). NEW JERSEY - Apparent damage increased, however, no pupation observed and second-brood moths not yet noticeable. (Ins. Dis. News1.). PENNSYLVANIA - Feeding injury appearing on whorls of field corn in south central part of State. Few larvae ready to pupate. (Pepper). DELAWARE - Second-generation eggs on field corn throughout State. Most common on pre-tasselling field corn adjacent to infested potatoes in western Kent County. Larvae on sweet corn, New Castle County. (MacCreary, Conrad). MARYLAND - First generation caused moderate to heavy damage to early sweet and field corn. Second-generation eggs on field corn, Worcester County. Averaged 75 egg masses per 100 plants in one large corn field near potatoes at Pocomoke, Worcester County. (U. Md., Ent. Dept.). VIRGINIA - Damaged corn in all parts of State, quite severe in many cases. (Morris). Damaged practically 100 percent of sweet corn plants at Painter, Accomack County and approximately 50 percent of ears. Light trap catches continued very heavy. (Hofmaster). KENTUCKY - Pupating in central part of State. Control required on market sweet corn and some field corn, (Rodriguez). ILLINOIS - In east St. Louis bottomland emergence is 50 percent, with total of 90 percent pupation. Averaged 0-10 egg masses per 100 stalks. (Ill. Ins. Rpt.). OHIO - Light at Elyria, Lorain County, and Milan, Erie County. Oviposition nearly complete at Wooster, Wayne County, with some early fifth-instar larvae present. (Triplehorn). IOWA - With continued cool weather and only 8 percent of larvae in northeast section full grown, or nearly so, it appears there will be no second brood. There will be a light second brood in northwestern and southwestern sections of the State. Greatest second-brood potential is in central and western areas of the State. (Iowa Ins. Inf.). ARKANSAS - Few first-generation larvae in central and northeastern fields checked. Moths 30-40 percent emerged, eggs being laid. Fresh feeding signs evident in very few fields. (Ark. Ins. Rpt.). WISCONSIN - Examination of early field corn in 6 southwestern counties showed populations to be higher than earlier egg mass counts indicated. Leaf feeding on 28 percent of plants in several fields. Few unhatched egg masses noted. Approximately 10 percent of larvae in fourth instar in Sauk County, remainder in second and third instars. Majority of egg masses in white head stage in Brown County, with 16 egg masses per 100 plants. Feeding by first instar in Washington and Fond du Lac Counties. Two hundred acres of canning sweet corn treated in Hancock-Plainfield area, Waushara County. (Wis. Coop. Rpt.).

MINNESOTA - Infestation is 34 percent in southwest district, 21 in south central, 16 in west central and 26 percent in central district. Populations appeared much lighter than expected. Weather conditions have been unfavorable during much of egg laying and hatching period. It is unlikely that second generation could be serious threat this season. (Minn. Ins. Rpt.). NORTH DAKOTA - Survey in Cass and Richland Counties indicates first generation not likely to be a problem. Egg masses averaged 1-2 per plant on 10-20 percent of plants. Generally, most eggs still in clear stage. (Colberg). SOUTH DAKOTA - Egg masses averaged 7 per 100 plants, 17 percent of plants showed shothole injury, first to second-stage larvae averaged 71 per 100 plants in northeast region. Egg hatch near complete in north central region, 33 percent of plants with shothole injury, first to second-instar larvae averaged 172 per 100 plants. In central region, egg masses averaged one per 100 plants, 21 percent of plants showed shothole injury, first to third-instar larvae averaged 71 per 100 plants. (Hantsbarger). NEBRASKA - Infestations averaged 10-45 percent in early planted corn, Deuel County. Larvae in second to fourth instars. Ranged 5-70 percent in Platte Valley, most larvae third to fifth instars. (Roselle).

CORN EARWORM (*Heliothis zea*) - NEW JERSEY - Egg laying light but heavier than in past two weeks. (Ins. Dis. News1.). DELAWARE - Entered newly developing ears of sweet corn, Sussex County. One small field had nearly 100 percent of ears infested. (MacCreary, Conrad). VIRGINIA - Damaged corn in Appomattox

County (Rowell, Smith); feeding on tassels, Floyd County (Morris, Talley). ALABAMA - Heavy on corn in central and southern sections. Damage in 1958 has been worse than in past several years. Heavy on millet in Escambia County, with 20 acres almost completely destroyed before control was applied. (Grimes). LOUISIANA - Continued high throughout State. (Spink). TEXAS - Averaged 25 larvae per grain sorghum head, Burleson County. (Randolph). OKLAHOMA - Averaged 8.6 larvae per ear on field corn at Stillwater. Silks have just wilted. (Walton). NEW MEXICO - Eggs and larvae abundant on corn. Damage severe throughout State. (N. M. Coop. Rpt.). UTAH - Serious in early sweet corn, Utah and Washington Counties. (Knowlton).

CORN LEAF APHID (*Rhopalosiphum maidis*) - MARYLAND - First of season noted in tassels of field corn at Pocomoke City, Worcester County. (U. Md., Ent. Dept.). DELAWARE - Colonies increased on field corn, central Sussex County. Alate forms on field corn, Kent County, and on sweet corn, New Castle County. (MacCreary, Conrad). KENTUCKY - Attacked field and sweet corn in various parts of State. Controls applied to market sweet corn. (Rodriguez). NEBRASKA - Generally moderate to heavy in corn and sorghum in central and eastern parts of State. (Roselle). OKLAHOMA - Light in whorls of sorghum in southwestern counties. (Coppock). TEXAS - Heavy on grain sorghum, Kaufman County. (Hawkins). IOWA - In corn in all parts of State. (Iowa Ins. Inf.). UTAH - Caused serious damage to spring barley in many Millard County fields and in some localities of several other counties. (Knowlton).

CORN ROOTWORMS (*Diabrotica* spp.) - COLORADO - Caused severe crown and root damage to corn, Logan and Larimer Counties. (Ext. Serv., Exp. Sta.). NEBRASKA - Caused moderate to severe damage in southeast and south central areas of State. (Roselle). IOWA - *D. undecimpunctata howardi* half to full grown in Washington County. *D. longicornis* larvae two-thirds to full grown. No adults have been reported. (Iowa Ins. Inf.).

A FALSE CHINCH BUG (*Nysius* sp.) - TEXAS - Heavy on grain sorghum in Hill County. (Morgan).

FLEA BEETLES - UTAH - Damaged corn at Mendon and Logan, Cache County. (Knowlton). ILLINOIS - *Chaetocnema pulicaria* averaged 0-4 per plant in East St. Louis area. Stewart's disease appearing in late sweet corn. (Ill. Ins. Rpt.). TEXAS - Active on young milo maize, some damage in Kaufman County. (Hawkins).

A GRASS MITE (*Oligonychus stickneyi*) - NEW MEXICO - Caused considerable damage to field corn. Severely damaged sweet corn, Dona Ana County. Heavy on Bermuda grass at Las Cruces. (N. M. Coop. Rpt.).

LESSER CORNSTALK BORER (*Elasmopalpus lignosellus*) - TEXAS - Caused light damage to young milo maize in Kaufman County. (Hawkins). Damaged peanuts, Mason County. Terminals up to 100 percent infested, Houston and Anderson Counties. (Hawkins, Davis).

SAP BEETLES - NEW JERSEY - *Carpophilus dimidiatus* first observed in any numbers in Burlington County, July 14. (Ins. Dis. News.). DELAWARE - *C. lugubris* prevalent in silk of sweet corn throughout Sussex County. (MacCreary, Conrad). MARYLAND - *C. lugubris* heavy in ears and tassels of early sweet and field corn in most sections. Some corn treated on Eastern Shore. Adults abundant in newly harvested wheat at Boyd, Montgomery County. Apparently came from moldy hay in barn. (U. Md., Ent. Dept.). VIRGINIA - Found in corn sampled. Larvae present in many fields. (Morris). ILLINOIS - *Carpophilus* spp. abundant on early sweet corn in East St. Louis area and southward, particularly in fields where corn earworm and European corn borer not controlled. (Ill. Ins. Rpt.). UTAH - Appearing in some sweet corn in Washington and Millard Counties. (Knowlton).

SORGHUM WEBWORM (Celama sorghiella) - LOUISIANA - Moderate on grain sorghum, Tensas and Franklin Parishes. (Spink). TEXAS - Averaged 5 larvae per head in grain sorghum, Burleson County. (Randolph).

SOUTHERN CRONSTALK BORER (Diatraea crambidoides) - MARYLAND - Light to moderate in whorls, tassels and stalks of field corn, Worcester and Somerset Counties. (U. Md., Ent. Dept.).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - ARKANSAS - Large percentage of second generation emerged, moths in most central and northeastern areas. Eggs not yet common. Very little feeding sign noted. (Ark. Ins. Rpt.).

ARMYWORM (Pseudaletia unipuncta) - NEW JERSEY - Present in considerable numbers, but not threatening at this time. (Ins. Dis. Newsl.). MINNESOTA - Low populations in scattered fields in west central and northwest districts. Occasional fields with 2-3 larvae per square foot, usually in lodged barley. Rye appears to be only grain in which damage has been sustained. Also reported in rye from south central area. Practically all reports indicate very light infestations. (Minn. Ins. Rpt.). WISCONSIN - Limited observations revealed no infestations in small grain. Evidence in corn was of older larval feeding, principally in low, weedy fields. Fifty percent parasitism evident in remaining few nearly mature larvae. Principal parasites were Apanteles militaris and Winthemia quadripustulata and two unidentified species. High parasitism indicates new generation may not be destructive except for localized areas. (Wis. Coop. Sur.). NORTH DAKOTA - Light in barley and wheat over eastern part of State. Present in most fields, but few in numbers. Little or no leaf stripping observed. Damaged rye in some places at Haley, Bowman County and southwestern Barnes County. Most heavy infestations in rye have been treated. (N. D. Ins. Rpt.). NEBRASKA - Total of 11,940 taken in light trap at North Platte, July 4-10. (Pruess).

APHIDS - OREGON - Caused severe damage to spring barley plantings in Union County. (Sidor).

ENGLISH GRAIN APHID (Macrosiphum granarium) - MONTANA - General in northern area grain fields. Most populations below economic levels at present time. (Roemhild). IDAHO - Varied from low to large numbers on spring planted grains, Latah, Nez Perce and Lewis Counties. Often heavy damage to late spring planted barley. Barley failing to head out in severely infested fields. Occasionally 75 per head in spring planted wheat in Lewis County, July 12, but dropped drastically in fields checked by July 16. (Gittins, Manis, Dailey).

HESSIAN FLY (Phytophaga destructor) - MONTANA - Caused minor damage in Custer County. (Roemhild). NEBRASKA - Averaged 2-40 percent in western part of State. In eastern portion, most fields show infestations, but degree has not been determined. (Andersen).

CHINCH BUG (Blissus leucopterus) - TEXAS - Heavy on Sudan grass in Burleson County. (Hawkins).

SAY STINK BUG (Chlorochroa sayi) - UTAH - Damaged small grains near Blanding and Monticello, San Juan County, near Escalante, Garfield County, and several areas in Washington, Sanpete, Sevier, Box Elder, Davis, Weber and Juab Counties. Becoming common on alfalfa and potatoes in many localities. (Knowlton, Thornley). Caused some damage to small grain in Beaver County. (Knowlton).

ALFALFA LOOPER (Autographa californica) - OREGON - Adults appeared in light trap collections in Benton and Lane Counties, July 13. (Capizzi). MONTANA - Probably this species, abundant in some alfalfa fields in Stillwater, Jefferson, Broadwater and those counties north of Great Falls, Cascade County. (Roemhild).

ALFALFA WEEVIL (Hypera postica) - NEVADA - Caused light to moderate damage to second-crop alfalfa in several fields at Lovelock, Pershing County. (Bechtel, July 11). MONTANA - Caused heavy damage to alfalfa fields not treated. Caused severe damage in areas in Judith Basin, Teton and Cascade Counties where non-economic infestations existed in 1957. (Roemhild). DELAWARE - Adults prevalent on alfalfa, New Castle County, common in one eastern Sussex County alfalfa field. (MacCreary, Conrad).

BLISTER BEETLES - NEW MEXICO - Spotty infestations defoliating alfalfa at Gila, Grant County, and Glenwood, Catron County. (N. M. Coop. Rpt.).

CLOVER APHID (Anuraphis bakeri) - WASHINGTON - Increased to 500 per head in some red clover fields near Quincy. (Johansen).

CLOVER ROOT CURCULIO (Sitona hispidula) - WASHINGTON - Up to 38 adults per 25 sweeps in second-year red clover seed fields near Quincy, which is highest in Columbia Basin fields during past 3 years. (Johansen). DELAWARE - Unusually prevalent on red clover in western New Castle and western Kent Counties. (MacCreary, Conrad).

CLOVER SEED CHALCID (Bruchophagus gibbus) - WASHINGTON - Ranged 5-75 adults per 25 sweeps in red clover seed fields near Quincy. Highest where hay cutting was not taken. (Johansen).

CUTWORMS - OREGON - Predicted extensive outbreaks occurred throughout State. Good control obtained due to timely warning, high losses averted. Predominately Peridroma margaritosa, some Agrotis ypsilon. Most larvae had reached maturity by July 13. (Every). NEW JERSEY - First 8 Agrotis ypsilon moths trapped at Moorestown, Burlington County, July 7. (Ins. Dis. News!). ILLINOIS - A. ypsilon damaged few widely scattered fields of late-planted corn. (Ill. Ins. Rpt.). UTAH - Peridroma margaritosa caused some damage to alfalfa and gardens in Beaver area. (Knowlton).

FALL ARMYWORM (Laphygma frugiperda) - PENNSYLVANIA - Fairly large numbers in hay, Juniata County. (Udine). LOUISIANA - Continued moderate on corn, Caddo and Bossier Parishes. (Spink). OKLAHOMA - Unusually light in alfalfa and sorghum throughout State. (Coppock).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - DELAWARE - Common on red clover, western New Castle County, and on alfalfa, western Kent County. (MacCreary, Conrad).

LYGUS BUGS (Lygus spp.) - OREGON - Required control in alfalfa seed fields in Malheur and Umatilla Counties, July 13. (Stephen). NEW MEXICO - Extremely heavy in seed alfalfa. Often averaged 1 per sweep; mostly nymphs in fields checked, Dona Ana County. (N. M. Coop. Rpt.). UTAH - Numerous to damaging in alfalfa seed fields in Millard, Cache and Box Elder Counties, where controls were omitted. (Knowlton). DELAWARE - L. lineolaris numerous in red clover and very common in alfalfa in New Castle County and prevalent on Sussex County alfalfa. (MacCreary, Conrad).

PEA APHID (Macrosiphum pisi) - UTAH - Required control in parts of Millard County. Threatening in parts of Piute, Garfield, Sanpete and Beaver Counties. (Knowlton). WYOMING - Moderate in second-cutting alfalfa in Cody-Powell area, Park County. (Davison). MINNESOTA - Heavy in alfalfa, 50-400 per 10 sweeps in southern district. Some fields show high counts of lady beetles. (Minn. Ins. Rpt.).

POTATO LEAFHOPPER (*Empoasca fabae*) - WISCONSIN - Numbers doubled in alfalfa in southwestern counties, but are considerably below 1957 levels. Averaged 9 per 100 sweeps in Richland County, 8 in Iowa and 25 per 100 sweeps in one Sauk County field. (Wis. Coop. Sur.). MARYLAND - Averaged 7 per sweep on alfalfa, Frederick County. Injury noticeable to some second-growth alfalfa fields in central counties. Light to moderate on soybeans, lower Eastern Shore. (U. Md., Ent. Dept.).

SIX-SPOTTED LEAFHOPPER (*Macrosteles fascifrons*) - COLORADO - Increases recorded from light trap samples, with 348 at Greeley, Weld County, July 1, and 500 at Rocky Ford, Otero County, July 27. None from Center, Saguache County. (Exp. Sta.).

SPIDER MITES - NEVADA - *Tetranychus* spp. light in various alfalfa fields at Lovelock, Pershing County. (Sebbas, Snyder, July 11). OREGON - *T. atlanticus* required control in several alfalfa fields near Milton-Freewater. (Stephen).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - NEW MEXICO - Generally light. Occasionally heavy in Dona Ana, Eddy and Chaves Counties. (N. M. Coop. Rpt.). CALIFORNIA - Light on alfalfa in Guinda area, Yolo County. (Cal. Coop. Rpt.). OKLAHOMA - Increased rapidly in western and southwestern areas, with 3000-6000 per 10 sweeps in one Kiowa County alfalfa field, which is highest reported for over a year. Many southwest fields had several hundred to one thousand and more per 10 sweeps. Considerably lower in western section. Very little change in remainder of State. (Coppock). COLORADO - Averaged 4-10 per 100 sweeps, July 11. Slight increase. No spread or new infestations at New Liberty, Mesa County. (Exp. Sta.).

THREE-CORNERED ALFALFA HOOPER (*Spissistilus festinus*) - NEW MEXICO - Common in most alfalfa fields, southern part of State. Highest about 1 per sweep at Gila, Grant County. (N. M. Coop. Rpt.). LOUISIANA - Building up in alfalfa, Caddo and Bossier Parishes. (Spink). TEXAS - Averaged 14 per 10 sweeps on alfalfa, Burleson County. (Turney).

WEBWORMS - NORTH DAKOTA - Infestations of *Loxostege sticticalis* in cereal grains, soybeans and flax requiring controls still being reported from several areas. (N. D. Ins. Rpt.). SOUTH DAKOTA - *L. similalis* larvae appearing in northeastern and east central alfalfa fields, with counts of one per 10 sweeps. (Hantsbarger). NEW MEXICO - *Crambus teterrellus* caused moderate to heavy damage to Bermuda grass at Las Cruces, Dona Ana County. (N. M. Coop. Rpt.).

BEAN LEAF BEETLE (*Cerotoma trifurcata*) - MARYLAND - Caused moderate damage to soybean foliage, Worcester County. (U. Md., Ent. Dept.).

GREEN CLOVERWORM (*Plathypena scabra*) - DELAWARE - Fairly common on Sussex County soybeans, although decreased on all forage crops. (MacCreary, Conrad).

MEXICAN BEAN BEETLE (*Epilachna varivestis*) - ALABAMA - Light to moderate on soybeans in Escambia County, adults, eggs and larvae present. Very light in Baldwin County. (Grimes).

VELVETBEAN CATERPILLAR (*Anticarsia gemmatilis*) - ALABAMA - On soybeans in Escambia and Baldwin Counties in limited numbers. (Grimes).

YELLOW-STRIPED ARMYWORM (*Prodenia ornithogalli*) - ALABAMA - Few specimens of very small larvae on soybeans, Escambia and Baldwin Counties. (Grimes).

RED-NECKED PEANUTWORM (*Stegasta basqueella*) - GEORGIA - Light on peanuts in 14 peanut raising counties. (Johnson). OKLAHOMA - Second-generation larvae about one-half developed in Caddo County. Light to moderate on peanuts, with 12-15 percent of terminals infested. (Walton). TEXAS - Damaged peanuts in Mason County. (Hawkins).

THRIPS - OKLAHOMA - Damage to peanuts in Caddo County generally light. (Walton).

JAPANESE BEETLE (*Popillia japonica*) - VIRGINIA - Present throughout King County, feeding on corn silks (Hall); medium in Essex County, attacked soybeans and corn throughout county (Little); medium on some soybean fields, Northumberland County (Saville). Heavy in some sections of Danville, Pittsylvania County, but not as heavy as in 1957 (Rowell); heavy on Augusta County farm (Willey, Swecker); not as numerous in Warren County as in past several years (Weddle). Severe on corn, grapes and small grain, Shenandoah County. Masses of adults in combined wheat. (Coiner). Light and county wide, Culpeper County. Less than normal. (Heltzel). MARYLAND - Heavy on soybeans planted with Sudan grass at Pocomoke City, Worcester County. (U. Md., Ent. Dept.). DELAWARE - Averaged 8 per 10 sweeps in red clover, New Castle County. Feeding increased on soybeans throughout State. (MacCreary, Conrad).

FRUIT INSECTS

APPLE APHID (Aphis pomi) - INDIANA - Most prominent pest of apples in northern tier of counties. (Marshall). OHIO - Abundant many northern orchards. (Cutright). WISCONSIN - Numerous many orchards in Door County (Wis. Coop. Sur., July 12).

MEALY PLUM APHID (Hyalopterus arundinis) - OHIO - Extremely heavy infestations on plums at Wooster. (Rings).

ORCHARD MITES - DELAWARE - Panonychus ulmi building up on apples throughout State. (Kelsey). INDIANA - P. ulmi building up some orchards at Vincennes (Hamilton) and Tetranychus spp. and P. ulmi increasing rapidly in apples where not rigidly checked in Orleans area (Marshall). KENTUCKY - P. ulmi building up in apple orchards in spite of frequent rains. (Rodriguez). OHIO - Populations of P. ulmi increasing rapidly in orchards not receiving early season preventive sprays in central area. Average 5-12 mites per leaf. (Rings). UTAH - Generally worse than any time during past four years. (Davis, Knowlton).

CODLING MOTH (Carpocapsa pomonella) - NEW JERSEY - Some second-brood entries in Burlington County in apples July 14. (Ins. Dis. News1.). PENNSYLVANIA - New brood emerging on apple in Adams County (Asquith) and new entries noted in Lancaster County (Pepper). OHIO - Larvae leaving fruit in increasing numbers. No second-brood moths to July 18. (Cutright). INDIANA - Hatch increasing slowly at Orleans. (Marshall). MISSOURI - Some new entries in apples in south-eastern area. (Wkly. Rpt. Fr. Gr.). UTAH - Moderate damage to apples in Utah, Beaver, Garfield, Kane and Washington Counties. (Knowlton).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - OHIO - Twig damage by second-brood larvae generally light. (Rings).

PEACH TWIG BORER (Anarsia lineatella) - CALIFORNIA - Light in early peaches in Reedley area of Fresno County and a problem in Stanislaus County on untreated peaches. (Cal. Coop. Rpt.).

PEACH TREE BORER (Sanninoidea exitiosa) - GEORGIA - Infestations heavy in many orchards in Fort Valley area. Considerable damage to peach trees in area. (Snapp, July 14). COLORADO - Control recommended in Delta County. (Exp. Sta.). RHODE ISLAND - Larval activity evident in Woonsocket. (Caroselli).

WESTERN PEACH TREE BORER (Sanninoidea exitiosa graefi) - OREGON - Abundant some orchards in Milton-Freewater area. (Stephen).

SALT-MARSH CATERPILLAR (Estigmene acrea) - CALIFORNIA - Medium infestation on prune trees in Gilroy area of Santa Clara County. (Cal. Coop. Rpt.).

SAN JOSE SCALE (Aspidiotus perniciosus) - IDAHO - Abundant on cherry trees at Caldwell with considerable feeding damage observed. (Bechtolt).

SAY STINK BUG (Chlorochroa sayi) - UTAH - Caused some damage to cherries and apricots in Washington County orchards. Some attacking developing apples and pears. (Hughes, Knowlton).

PEAR PSYLLA (Psylla pyricola) - CALIFORNIA - Heavy infestation in orchard in San Juan Bautista Valley, San Benito County. First record for county. (Cal. Coop. Rpt.).

PEAR-SLUG (Caliroa cerasi) - RHODE ISLAND - Skeletonizing leaves of cherry trees in Warren, Bristol and North Providence. (Mathewson). NEVADA - Damaging pears and cherries in west central area. (Bechtel, July 11).

PLUM CURCULIO (Conotrachelus nenuphar) - OHIO - Larval emergence from infested fruits nearly completed. No first brood adults emerged at Wooster. (Rings).

POTATO LEAFHOPPER (Empoasca fabae) - CALIFORNIA - Medium infestation of apple trees in southern Plumas County. (Cal. Coop. Rpt.).

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - Medium infestation of walnuts in San Diego, San Diego County. (Cal. Coop. Rpt.).

WALNUT APHID (Chromaphis juglandicola) - IDAHO - Extremely abundant on black walnut trees in Parma and Payette. (Manis).

FALL WEBWORM (Hyphantria cunea) - LOUISIANA - Remains a problem on dooryard pecan trees throughout State. (Spink).

LEAF ROLLERS - NEW JERSEY - Moth flights of Sparganothis spp. very heavy in cranberries, especially in Ocean County. (Ins. Dis. Newsl.).

CALIFORNIA RED SCALE (Aonidiella aurantii) - CALIFORNIA - Heavy infestations on citrus in Orland area of Glenn County. (Cal. Coop. Rpt.).

TRUCK CROP INSECTS

SUGAR-BEET ROOT MAGGOT (Tetanops myopaeformis) - MONTANA - Severe local damage to beet fields from Hysham to North Dakota border along Yellowstone River. (Roemhild).

BET WEBWORM (Loxostege sticticalis) - WYOMING - Infestation in Powell-Cody area decreased. Damaging beets and beans in isolated spots. (Davison). MONTANA - Generally present and damaging over State. (Roemhild). NORTH DAKOTA - Several severe infestations injuring sugar beets in Hillsboro area, Traill County. (N. D. Ins. Rpt.). MINNESOTA - Some spraying started in west Polk County. (Minn. Ins. Rpt.).

BET LEAFHOPPER (Circulifer tenellus) - ILLINOIS - Four adults and 3 nymphs per 100 sweeps in horseradish in one unsprayed field. Most growers following good spray program. (Ill. Ins. Rpt.). COLORADO - Curly top disease in tomatoes, sugar beets and possibly potatoes is chief concern in western and eastern counties. Leafhopper counts 60-80 per 100 sweeps in Garfield County, 80-100 in Montrose County on July 11. Curly top as high as 20 percent in some sugar beet fields in eastern counties; an average of 2-5 percent in Larimer, Weld and Boulder Counties. (Exp. Sta.). UTAH - Generally very abundant on sugar beets. Many fields 40-50 percent curly top-infested over State. (Knowlton).

BET ARMYWORM (Laphygma exigua) - CALIFORNIA - Heavy infestations on sugar beets in Walnut Grove area of Sacramento County and light on sunflowers in Arboga district of Yuba County. (Cal. Coop. Rpt.).

TARNISHED PLANT BUG (Lygus lineolaris) - PENNSYLVANIA - Fairly abundant on potatoes in south central area. (Pepper).

GREEN PEACH APHID (Myzus persicae) - WASHINGTON - Moderate numbers but increasing, more abundant than usual on tomatoes at Yakima. On potatoes in eastern area. Light populations, less than normal. (Landis).

POTATO APHIDS - MAINE - Populations, although still very small, increased rapidly at Presque Isle and vicinity. Situation normal for time of year. Aphis abbreviata and Macrosiphum solanifolii predominate, followed by Myzus persicae and M. solani. Lady beetles above normal in abundance. (Shands).

POTATO PSYLLID (Paratrioza cockerelli) - WYOMING - Populations building up in central area. Counts 64 per 50 sweeps on matrimonyvine in midwest, lower elsewhere on matrimonyvine and potatoes. (Davison).

LEAFHOPPERS - IDAHO - Empoasca filamenta building up in large numbers in commercial potato fields around Idaho Falls. (Manis). VIRGINIA - Medium to heavy infestations of E. fabae on potatoes and beans in Giles County. (Holpp). PENNSYLVANIA - E. fabae fairly abundant on potatoes in south central area. (Pepper). MARYLAND - E. fabae increasing on beans most sections. (U. Md., Ent. Dept.).

SUGAR-BEET WIREWORM (Limonijs californicus) - CALIFORNIA - Damaged acre of tomato transplants, 10 acres peppers and 60 acres of lettuce in Orange County. (Campbell, USDA).

TOMATO FRUITWORM (Heliothis zea) - NEW MEXICO - Beginning to cause trouble in tomato fields in Luna and Dona Ana Counties. (N. M. Coop. Rpt.).

HORMWORMS (Protoparce spp.) - NEW MEXICO - Damaging tomatoes several fields in Luna, Dona Ana and Lea Counties. (N. M. Coop. Rpt.). DELAWARE - Damaging tomatoes in Kent and New Castle Counties. Second-generation eggs on peppers in Sussex County. (MacCreary, Conrad).

STALK BORER (Papaipema nebris) - NORTH CAROLINA - Numerous in potato stems in Beaufort County. (Neilson, Farrier).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - DELAWARE - Adults and larvae very common on potatoes and tomatoes in areas of State. (MacCreary, Conrad).

PEA APHID (Macrosiphum pisi) - IDAHO - Populations in peas in Latah, Nez Perce and Lewis Counties dropped drastically as pea fields began maturing and predators began building up. Damage to peas variable with occasional fields showing considerable feeding damage. (Gittins, Dailey). Abundant on lentils in Moscow area. (Manis).

MEXICAN BEAN BEETLE (Epilachna varivestis) - UTAH - Damage increasing in Cache, Box Elder, Weber and Salt Lake Counties. (Knowlton). ALABAMA - Heavy infestations on lima beans in Escambia County. As many as 100 larvae and adults per 2 feet of row. (Grimes). COLORADO - Adults abundant in Loma and Fruita areas of Mesa County. Egg deposition heavy in early planted fields. Control recommended in Montrose County. (Exp. Sta.). MARYLAND - Heavy on beans in home gardens, light on commercial beans generally. (U. Md., Ent. Dept.). DELAWARE - Feeding heavily on beans in Sussex County. Larvae predominate. (MacCreary, Conrad).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - CALIFORNIA - Building up in bean fields in southern area. Some treatments applied, especially along edges of fields. (Campbell, USDA). WASHINGTON - All stages present, light infestation but increasing on dry beans at Quincy. (Landis).

A BEETLE (Strigoderma arboricola) - WISCONSIN - Causing greatest concern to bean growers in Plainfield-Hancock area. (Wis. Coop. Sur.).

ASIATIC GARDEN BEETLE (Autoserica castanea) - DELAWARE - First adult noted July 7. Large flight noted on July 13 in New Castle County. (MacCreary, Conrad).

FLEA BEETLES - NEW JERSEY - Adults very numerous on crucifers from Cape May to Middlesex County. (Ins. Dis. Newsl.). PENNSYLVANIA - Second-generation Epitrix cucumeris appearing on potatoes in south central area. (Pepper). COLORADO - Epitrix tuberosa adults 5-10 per 100 sweeps on potatoes in Carbondale area of Garfield County. (Exp. Sta.). CALIFORNIA - Heavy infestations of Epitrix hirtipennis on potatoes in Watsonville area of Santa Cruz County. (Cal. Coop. Rpt.).

CABBAGE APHID (*Brevicoryne brassicae*) - NEW MEXICO - Infestations damaging cabbage in Luna and Lea Counties. (N. M. Coop. Rpt.).

CABBAGE LOOPER (*Trichoplusia ni*) - NEW JERSEY - Moderate numbers in Cape May County on crucifers. (Ins. Dis. Newsl.). NEW MEXICO - Moderate to heavy infestations damaging cabbage at Deming, Luna County. Control difficult. (N. M. Coop. Rpt.). DELAWARE - Common on cabbage in Kent and Sussex Counties. (MacCreary, Conrad).

CROSS-STRIPED CABBAGEWORM (*Evergestis rimosalis*) - ALABAMA - Abundant in Randolph County, but scarce in Lee County on cabbage. (Guyton).

IMPORTED CABBAGEWORM (*Pieris rapae*) - DELAWARE - Common on cabbage in areas of Kent and Sussex Counties. (MacCreary, Conrad).

WHITE-LINED SPHINX (*Celerio lineata*) - MONTANA - Scattered and widespread over State. Little damage apparent. (Roemhild).

TORTOISE BEETLES - ALABAMA - *Deloyala guttata*, *D. vittata* and *Metriona bicolor* moderate on sweetpotatoes in Lee County. (Guyton). NEW MEXICO - *M. bicolor* damaging chili plants at Redrock, Grant County. (N. M. Coop. Rpt.).

SPINACH LEAF MINER (*Pegomya hyoscyami*) - OHIO - Second-generation eggs abundant on sugar beets in Milan area, July 15. Very few new blotch mines or living larvae present. (Triplehorn).

PEPPER WEEVIL (*Anthonomus eugenii*) - CALIFORNIA - Light infestations near San Juan Capistrano, Orange County. (Campbell, USDA).

ONION THRIPS (*Thrips tabaci*) - NEVADA - Light to heavy populations on onions in Smith Valley, Lyon County. (Gallaway, July 11).

ONION MAGGOT (*Hylemya antiqua*) - MONTANA - Severe damage to home and commercial plantings in western area. (Roemhild). MINNESOTA - Serious in home gardens in Thief River Falls area. (Minn. Ins. Rpt.). WASHINGTON - Populations, in association with *H. cilicrura*, considerably greater in dry onion fields near Moses Lake than those which occurred in 1957, even though treatments applied. Second generation pupation at present. (Johansen).

JAPANESE BEETLE (*Popillia japonica*) - DELAWARE - Prevalent on asparagus ferns in areas of State. (MacCreary, Conrad).

SQUASH BUG (*Anasa tristis*) - IOWA - Becoming abundant. (Iowa Ins. Inf.). NEW MEXICO - Damaging cantaloup plants in Valencia, Socorro and Hidalgo Counties. (N. M. Coop. Rpt.). UTAH - Damage to squash common in Utah, Millard and Beaver Counties. (Knowlton).

A CUCUMBER BEETLE (*Diabrotica undecimpunctata tenella*) - NEW MEXICO - Damaging cantaloup plants in Valencia, Socorro and Hidalgo Counties. (N. M. Coop. Rpt.).

MELON APHID (*Aphis gossypii*) - OKLAHOMA - Light on watermelons in Grady and Noble Counties. (Coppock).

TOBACCO INSECTS

GREEN PEACH APHID (*Myzus persicae*) - VIRGINIA - Infestations decreased on tobacco in Pittsylvania County. (Dominick). MARYLAND - Building up gradually in southern counties. No treatments required to July 18. (U. Md., Ent. Dept.). NORTH CAROLINA - Increasing on tobacco in Granville County. No serious infestations at present. (Chamberlin).

HORNWORMS (*Protoparce* spp.) - MARYLAND - Generally light on tobacco in Prince Georges and St. Marys Counties. (U. Md., Ent. Dept.). NORTH CAROLINA - Light on tobacco in Granville County. (Chamberlin).

TOBACCO BUDWORM (*Heliothis virescens*) - GEORGIA - Light infestations in 8 counties. (Johnson). MARYLAND - Occasionally moderate infestation in St. Marys County. (U. Md., Ent. Dept.).

TOBACCO FLEA BEETLE (*Epitrix hirtipennis*) - GEORGIA - Light to moderate infestations on tobacco in 8 counties. (Johnson). VIRGINIA - Increasing on field tobacco in Pittsylvania County. (Dominick).

COTTON INSECTS

BOLL WEEVIL (*Anthonomus grandis*) - NORTH CAROLINA - First-generation weevils appeared in lower southeastern counties with sharp increase in square infestations in few fields. Infestations generally low in central and more northern areas. (Cott. News Lett.). SOUTH CAROLINA - First-generation weevils emerging and feeding in Florence area. High infestations in several treated fields in Marlboro County. (Fye et al.). GEORGIA - Infestation counts ranged from 0-76 percent, averaging 22 percent, in 56 northwestern and southern fields. (Johnson). ALABAMA - Infestations increasing to critical point some southern and southeastern areas. Infestations ranged from 1-88 percent. (Grimes). MISSISSIPPI - Infestations remain exceptionally low in delta counties. (Merkl et al.). TENNESSEE - First-generation weevils emerging in most infested fields in western area. Infestations spotty and heavier in older cotton. Square counts made in 79 fields with 49 found infested. Percent infested squares averaged 4 compared with 19 percent at same time last year. (Locke). MISSOURI - First infestations of season in Dunklin County. Eight fields infested with 2 percent or less of squares punctured. (Kyd, Thomas). ARKANSAS - Total of 3792 fields scouted with 44.8 percent found infested. First-generation emergence continues with peak expected during week of July 20. (Ark. Ins. Rpt.). LOUISIANA - Percent infestation averaged 14 in Grant Parish, 11 in Rapides, 12 in Avoyelles, 17 in Ouachita and 7 in Morehouse Parish. (Spink). Average square infestation in Tallulah area was 5 percent in treated fields and 4 percent in untreated fields. (Smith et al.). TEXAS - Square infestation averaged 14.6 percent in treated fields and 38.6 percent in untreated fields in McLennan and Falls Counties. Migration to late fruiting fields expected in near future. (Parencia et al.). Continue a problem in upper coastal, eastern and northeastern areas. (Gaines).

BOLLWORMS (*Heliothis* spp. et al.). - NORTH CAROLINA - Heavy larval damage in several fields in Scotland and Anson Counties. (Cott. News Lett.). SOUTH CAROLINA - Remain a major threat in Florence area. Several fields in Marlboro County with 50 percent of square, blooms and bolls infested. Many growers consider outbreak to be one of the most severe ever experienced in area. (Fye et al.). Continues to be number one pest of cotton throughout State. (Cott. Lett.). GEORGIA - Egg counts ranged from 3-98 per 100 terminals, averaging 32 per 100 terminals, in 56 northwestern and southern fields. Larvae averaged 8 per 100 terminals. (Johnson). ALABAMA - Larval populations ranged from 0-21 per 100 terminals. Infestations remain constant in southern area. Limited number of eggs found. (Grimes). MISSISSIPPI - Some square injury; no general egg deposition in delta counties. (Merkl et al.). TENNESSEE - Light infestations in western area. (Locke). MISSOURI - Slight drop in larval populations but increase in eggs compared with previous week. (Kyd, Thomas). ARKANSAS - Eggs appearing on cotton. Of 3792 fields scouted, 35.5 percent infested. (Ark. Ins. Rpt.). LOUISIANA - Percent infestation averaged 0.3 to 1 in Grant, Rapides, Avoyelles, Ouachita and Morehouse Parishes. (Spink). Percent square infestation in Tallulah area averaged 5 percent in treated fields and 5 percent in untreated fields. (Smith et al.). TEXAS - Square injury averaged 4.3 percent in McLennan and Falls Counties. (Parencia et al.). Young

larvae appearing in many areas of State. (Gaines). NEW MEXICO - Eggs and larvae of *H. zea* mostly light and spotty, with few moderate infestations in cotton growing areas. (N. M. Coop. Rpt.). ARIZONA - Heavy infestations in Pinal County and increasing in Pima County. Some control being applied. (Bottger, Kauffman, Sheets).

APHIDS - SOUTH CAROLINA - Many found in all fields in Florence area. One serious outbreak reported. (Fye et al.). Control warranted many fields in State. (Cott. Lett.). GEORGIA - Infestations light to heavy in cotton growing counties. (Johnson). ALABAMA - Heavy infestations of *Aphis gossypii* in central and southern areas. (Grimes). MISSISSIPPI - Localized hot spots in delta counties. (Merkl et al.). ARKANSAS - Present in practically all fields; numerous in regularly treated fields where aphicide not included. (Ark. Ins. Rpt.). LOUISIANA - Building up in treated fields in Tallulah area. (Smith et al.). NEW MEXICO - Scattered moderate to heavy infestations of *A. gossypii* in Dona Ana, Luna and Eddy Counties. (N. M. Coop. Rpt.).

SPIDER MITES - GEORGIA - Infestations light to heavy in cotton growing counties. (Johnson). ALABAMA - Infestations continue to increase most parts of State. In southeastern area, infestations heavier than previously observed at any time. (Grimes). MISSISSIPPI - Localized hot spots in delta counties. (Merkl et al.). SOUTH CAROLINA - Buildups reported in Coastal Plain counties. (Cott. Lett.). MISSOURI - Light to moderate marginal or widely scattered field infestations. (Kyd, Thomas). TEXAS - Infestations light to medium in McLennan and Falls Counties. (Parenchia et al.).

CABBAGE LOOPER (*Trichoplusia ni*) - GEORGIA - Light infestations in several counties. (Johnson). NEW MEXICO - Continue to buildup throughout most cotton growing areas. Larvae much more numerous than previous week. (N. M. Coop. Rpt.).

COTTON LEAFWORM (*Alabama argillacea*) - ARIZONA - Two found on cotton in Deer Valley area. (Bottger, Sheets, Kauffman; July 10).

COTTON SQUARE BORER (*Strymon melinus*) - NEW MEXICO - Occasional larva found on cotton in Socorro and Eddy Counties. (N. M. Coop. Rpt.).

STALK BORER (*Papaipema nebris*) - MISSISSIPPI - Causing noticeable damage to cotton in Choctaw County. (Hutchins).

FLEAHOPPERS - NEW MEXICO - Populations appear to be decreasing most fields in Chaves, Eddy, Lea, Dona Ana, Luna and Hidalgo Counties. (N. M. Coop. Rpt.). TEXAS - Infestations decreased. Injurious infestations confined to very few untreated fields in McLennan and Falls Counties. (Parenchia et al.). Light to heavy populations in central, north central and northeastern areas. (Gaines). ARIZONA - Populations of *Rhinacloa forticornis* decreasing though still high some fields. (Bottger, Kauffman, Sheets; July 10).

A LEAF BEETLE (*Colaspis* sp.) - MISSISSIPPI - Feeding on cotton in northeastern counties. (Hutchins). ARKANSAS - Adults present many cotton fields. (Ark. Ins. Rpt.).

STINK BUGS - NEW MEXICO - Heavy infestations of *Chlorochroa sayi* and *C. ligata* severely damaging bolls and squares in Deming, Luna County. Less severe infestations in Dona Ana County. (N. M. Coop. Rpt.). ARIZONA - Populations, mostly *C. sayi* and a small green species, increasing in Pima County. (Bottger, Kauffman, Sheets).

LYGUS BUGS (*Lygus* spp.) - NEW MEXICO - Light to heavy in cotton growing areas. Counts as high as 35 per 100 sweeps in experimental check plots near Las Cruces, Dona Ana County. (N. M. Coop. Rpt.). ARIZONA - Many fields in Maricopa County heavily populated. One field near Litchfield averaged 24 per 100 sweeps. In Pima and Pinal Counties populations increasing. (Bottger, Kauffman, Sheets).

SNOWY TREE CRICKET (Oecanthus niveus) - OKLAHOMA - Infestations causing alarm to some southwestern growers. Approximately 3 percent lodging of cotton plants due to cricket ovipositioning in Blair area. (Stoner).

THRIPS - TEXAS - Light to medium infestations in eastern, northeastern, north central, west cross timbers and northwestern areas. (Gaines).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - TEXAS - Of the 36 additional spots suspected of being infested, 19, with up to 100 brood trees, were found with this pest. Control either completed or in progress on all known spots and results apparently effective. (Young).

DOUGLAS-FIR BEETLE (Dendroctonus pseudotsugae) - CALIFORNIA - Killing groups of Douglas fir in a 1,100-acre stand of old trees in the Upper Grider Creek area of Siskiyou County. (Weyrick, USFS).

WESTERN PINE BEETLE (Dendroctonus brevicomis) - CALIFORNIA - Seriously damaging Ponderosa pine in a 1,200-acre stand in Stonyford area of Colusa and Glenn Counties. (Lloyd, USFS).

BARK BEETLES (Ips spp.) - CALIFORNIA - Damaging 50 acres of Ponderosa pines in Indian Valley Creek area, Trinity County, as a result of blown-down trees. (Estes, USFS).

ASIATIC OAK WEEVIL (Crytepistomus castaneus) - DELAWARE - Feeding commonly on various oaks throughout State. (MacCreary, Conrad). MARYLAND - Adults causing moderate damage to oak seedlings at Fairland. (U. Md., Ent. Dept.).

SPRUCE BUD SCALE (Physokermes piceae) - CALIFORNIA - Reported for first time in State. Medium infestation on a few spruce trees in Oakland, Niles and at Mission San Jose in Alameda County. (Cal. Coop. Rpt.).

SPRUCE BUDWORM (Choristoneura fumiferana) - IDAHO - Infestation in Gibbon Pass area near North Fork, Lemhi County. Considerable damage to Douglasfir. (Manis).

NANTUCKET PINE MOTH (Rhyacionia frustrana) - ARKANSAS - Emergence of third brood at its peak in south central area. Heavy emergence in infested areas of State expected near end of July. (Ark. Ins. Rpt.).

LARCH SAWFLY (Coleophora laricella) - PENNSYLVANIA - Pupation nearly completed at Clinton. (Drooz). WISCONSIN - More plentiful than in 1957 in Waushara County. Pupation started in west central area. (Wis. Coop. Sur.).

YELLOW-NECKED CATERPILLAR (Datana ministra) - DELAWARE - Damage quite noticeable in eastern New Castle County with as high as 7 colonies on a single tree. (MacCreary, Conrad).

SCALE INSECTS - UTAH - Gossyparia spuria damaging elms at Manti, Salt Lake and Orem. (Knowlton). OKLAHOMA - Heavy infestation of Chionaspis americana on scattered native elms in Stillwater area. (Apt). PENNSYLVANIA - Severe on maple and other shade trees, Luzerne County, July 11. (Nichols).

ELM LEAF BEETLE (Galerucella xanthomelaena) - CALIFORNIA - Heavy and damaging elms in Dinuba area, Tulare County. Damaging yard trees in Sacramento and medium infestations in Santa Cruz. (Cal. Coop. Rpt.). NEVADA - Pupation of first brood in progress in west central area. Adult emergence should begin about July 18. (Bechtel, July 11). ARKANSAS - Damage to Chinese elms locally severe in southwestern area except where control applied. (Ark. Ins. Rpt.).

PENNSYLVANIA - Larvae abundant on and around base of elms in south central area. (Pepper). NEW JERSEY - Very abundant some areas of State. (Ins. Dis. Newsl.).

ELM SAWFLY (*Cimbex americana*) - SOUTH DAKOTA - Elm tree defoliation in south central region by larvae. (Hantsbarger).

A BARK BEETLE - IOWA - Another case of Dutch elm disease has been confirmed in Scott County. This is the first case reported in 1958. (Iowa Ins. Inf.).

SMALLER EUROPEAN ELM BARK BEETLE (*Scolytus multistriatus*) - CALIFORNIA - Heavy on elms in San Jose, Santa Clara County. (Cal. Coop. Rpt.). WISCONSIN - Total of 617 elms with Dutch elm disease on July 16. (Wis. Coop. Sur.).

POPLAR AND WILLOW BORER (*Sternonchus lapathi*) - MONTANA - Severely damaged willows in Hill County. (Roemhild).

MIMOSA WEBWORM (*Homodaula albizziae*) - MARYLAND - Injury to mimosa trees in Prince Georges County becoming prominent. (U. Md., Ent. Dept.).

A ROYAL PALM BUG (*Xylastodoris luteolus*) - FLORIDA - Adults and nymphs averaged several hundred per frond on about 100 royal palms at Ft. Lauderdale, Broward County. (Fla. Ins. Sur.).

A MAY BEETLE (*Phyllophaga* sp.) - NORTH CAROLINA - Defoliating trees, shrubs and flowers in Greensboro and overly abundant in Richmond and Wake Counties. (Jones, Farrier).

MITES - RHODE ISLAND - Severe on arborvitae and spruce in Warwick area. (Caroselli). NEW MEXICO - *Oligonychus coniferarum* damaging juniper in Albuquerque, Bernalillo County, and Las Cruces, Dona Ana County. (N. M. Coop. Rpt.). MINNESOTA - *Tetranychus telarius* severe on evergreens in scattered areas throughout State. (Minn. Ins. Rpt.). MARYLAND - Spider mites heavy on spruce at Baltimore. (U. Md., Ent. Dept.).

JAPANESE BEETLE (*Popillia japonica*) - NEW JERSEY - Causing great deal of concern in central area of State on ornamentals. (Ins. Dis. Newsl.). IOWA - Caught in traps in Ft. Madison area early in July. (Iowa Ins. Inf.). RHODE ISLAND - Heavy adult emergence at Crantston, Cumberland, Lincoln. Other areas generally lighter than in 1957. (Mathewson, Kerr). VIRGINIA - Feeding on flowers, grape vines and fruit trees throughout King George County. Heavy enough to justify treatment of grapes and flowers. (Hall). NORTH CAROLINA - Decreasing in central and eastern areas. Adult emergence approaching peak in western counties, especially Buncombe and Henderson. Heavy populations in Boone area. (PPC). Eastern section of Cumberland County also heavily infested. (Johnson).

FALL WEBWORM (*Hyphantria cunea*) - NEW JERSEY - Becoming active on ornamentals in southern area. (Ins. Dis. Newsl.). IDAHO - Larvae seriously webbing and tying leaves of chokecherry bushes in the North Fork area of Lemhi County. (Manis). Heavily webbing and seriously defoliating chokecherries in Kamiah and Orofino areas. (Gittins).

BAGWORM (*Thyridopteryx ephemeraeformis*) - GEORGIA - Very heavy infestation on ornamentals in Fort Valley area. Arborvitae defoliated and grass damaged. (Snapp, July 11). VIRGINIA - Severe and general on arborvitae and similar plants in Hampton and York Counties. Totally defoliated some of the plants. (Adams). Severe on arborvitae in Newport News. (Stump). DELAWARE - Very heavy on red cedars locally in Sussex County. (MacCreary, Conrad). MARYLAND - Heavy on cedars at College Park. (U. Md., Ent. Dept.). TEXAS - Very heavy on evergreens, Kaufman City. (Hawkins).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - NEVADA - Aedes sp. increasing in Lovelock area, Pershing County. (Bechtel, Snyder, July 11). IOWA - Becoming very serious. (Iowa Ins. Inf.). UTAH - Troublesome in many areas. (Knowlton). NORTH DAKOTA - Culex tarsalis females averaged 100-200 per trap per night in Fargo rural areas. Aedes vexans adults averaged 75 per trap per night showing increase in numbers over week prior to July 14. Larvae in area ponds. (Noetzel). NORTH CAROLINA - Aedes sollicitans population high in Pamlico and Hyde Counties, moderate in Carteret County. (Usry).

HORN FLY (Siphona irritans) - NEBRASKA - Populations building up in sandhills range. (Roselle). UTAH - Annoying cattle in Rich and Weber Counties. (Knowlton). OKLAHOMA - Averaged 200-500 per cow on untreated animals in western one half of State. (Coppock).

ITCH MITE (Sarcoptes scabiei) - NEW MEXICO - Severe on young pigs at Virden, Hidalgo County. Has caused death of some. (N. M. Coop. Rpt.).

STABLE FLY (Stomoxys calcitrans) - NEBRASKA - Populations increased in eastern and central areas. (Roselle).

CATTLE GRUBS (Hypoderma spp.) - UTAH - Heel flies annoying cattle in Rich County and Ogden Valley of Weber County. (Knowlton).

FLIES - IOWA - Stable, horn and horse flies causing considerable loss to beef and dairy herds. (Iowa Ins. Inf.). UTAH - Horse flies extremely annoying to livestock and occasionally biting people in Randolph-Woodruff area and in Allen Canyon, Rich County. Deer flies annoying people and livestock in area of Rich County. (Knowlton).

AMERICAN DOG TICK (Dermacentor variabilis) - NEBRASKA - Increased populations in central Platte Valley. (Roselle).

POULTRY LICE - IOWA - Extremely numerous on farm flocks. (Iowa Ins. Inf.).

FLEAS - NEBRASKA - Numerous infestations of dog fleas in homes in southeast. (Roselle). OKLAHOMA - An unusually large number of dwellings infested in Tulsa area. (Bower).

STORED-PRODUCT INSECTS

A GRAIN MITE (Lepidoglyphus cadaverum) - OREGON - Heavy in ryegrass seed in Salem, July 1. (Krantz).

STORED-GRAIN BEETLES - WASHINGTON - Oryzaephilus surinamensis and Laemophloeus spp. moderately heavy in wheat and barley held over from 1957 harvest in eastern part of State. (Walker).

BENEFICIAL INSECTS

HONEY BEE (Apis mellifera) - RHODE ISLAND - Three cases of foul brood in North Kingston area. (Hansen). MINNESOTA - Prevailing cloudy and cool weather has retarded activity in bee hives over much of State. Warm, sunny weather needed to realize a normal honey harvest. (Minn. Ins. Rpt.).

PREDATORS - NEVADA - Lady beetles, lacewings and syrphid larvae extremely numerous in most alfalfa growing areas of State. (Bechtel, et al., July 11). SOUTH DAKOTA - Lady beetles abundant throughout eastern and south central alfalfa fields, with up to 100 larvae, pupae and adults per 10 sweeps. Lacewing larvae and adults averaged 6 per 100 sweeps in same areas. (Hantsbarger, July 11). IDAHO - Adults emerging in great numbers on crops and wasteland, many parts of Latah, Nez Perce and Lewis Counties. Extreme abundance of this species will probably take care of most aphid problems in these areas. (Manis, Gittins). NORTH DAKOTA - High numbers of adult syrphids in many cereal grain fields in Northwood area, Grand Forks County. (Post). OKLAHOMA - Collops spp. averaged 1-5 adults per 10 sweeps from scattered alfalfa fields in western and southwestern counties. Lady beetles increased in fields with considerable numbers of spotted alfalfa aphid. (Coppock).

MISCELLANEOUS INSECTS

EUROPEAN EARWIG (Forficula auricularia) - NEVADA - Becoming nuisance around homes, damaged garden plants and flowers, Reno-Sparks area, Washoe County. (Bechtel, Lauderdale, July 11). UTAH - Very annoying in several Beaver County localities. A common problem in many communities. (Knowlton). RHODE ISLAND - Continues troublesome throughout State. (Caroselli).

A JERUSALEM CRICKET (Stenopelmatus sp.) - NEVADA - Numerous north of Sparks, Washoe County. (Lauderdale, July 11).

STRAWBERRY ROOT WEEVIL (Brachyrhinus ovatus) - RHODE ISLAND - Entering houses in numbers at Johnston. (Mathewson).

ADDITIONAL NOTES

NEW YORK - APPLE APHID and ORCHARD MITE buildups moderate to heavy in few orchards in Niagara County. APPLE MAGGOT emergence appears to be at low level in Wayne County and may continue later into the season than usual. Hatching of MEXICAN BEAN BEETLE eggs occurring generally. Populations are abundant in Erie County. TOOTHED FLEA BEETLE was exceptionally abundant on weedy corn in Poughkeepsie, July 13-15. First TOMATO HORNWORM moth trapped July 11 in Hudson Valley. (N. Y. Wkly. Rpt.).

ALABAMA - EUROPEAN CORN BORER moths very abundant in northern part of State. In several areas checked, egg masses averaged 50 per 100 plants. (Ruffin).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Protoparce sexta	quinq.	Heliothis zea	vires.
ARKANSAS								
Atkins 7/10-16							192	
Fayetteville 7/10-16	78	31		18			59	
Hope 7/10-16	7	2					17	
Kelso 7/10-16	15	4		2			2	
Morrilton 7/10-16	46	12					10	
ILLINOIS								
Urbana 7/11-17	642					8		
INDIANA(Counties)								
Orange 7/9-15	927	22	3	72	22	7		
Tippecanoe 7/10-14	4152	9	1	81				
LOUISIANA								
Baton Rouge 7/11-17		2	168				4	1
Shreveport 7/11-17	1		5				4	
MAINE								
Monmouth 7/13-19	33							
Orono 7/13-19	7							
MISSISSIPPI								
Grenada 7/7-12	6	4	9					
Senatobia 7/4-17		9					3	
*State College 7/6-12	251	12	433	3	1	1	11	20
*Stoneville 7/11-17	92	130	215	3	14		45	1
NEBRASKA								
Alliance 7/2-7	108	1		73		4	1	
Kearney 7/3-10	236	5		141	2	7	3	
Lincoln 7/4-11	3386	280		72			105	
North Platte 7/4-10	11,940	61		1869	10	63	23	1
Scotts Bluff 7/8-14	866	9		172				
NORTH CAROLINA								
Clayton 7/17	42	4	36		26	2	10	4
Faison 7/17	18	2	46		12	17	5	1
SOUTH CAROLINA								
Charleston 7/7-20	3	3	213	1	35		5	
Clemson 7/12-18	270	10	190	1	27	23	37	3
Florence 7/13-19	145	17	211	38	95	14	150	46
TENNESSEE(Counties)								
Blount 7/8-14	273	27	231	18	6	6	27	
Cumberland	514	8	50	30	2	6	20	
Greene	1776	15	66	51	6	9		
Mauzy	512		84	12	8	8	24	
Robertson	732	12	30	60	12	6	6	
TEXAS								
Brownsville 7/8-11		16					48	496

ARMYWORM (*Pseudaletia unipuncta*) - WISCONSIN - 7/8-14: *Arlington - 510;
 Fall River - 132; Janesville - 722; La Crosse - 1000; Middleton - 140;
 Oakfield - 109; Platteville - 652; Ripon - 1496; River Falls - 1710;
 Rosendale - 681; Stevens Point -66; *Theresa - 796.

*Two traps-State College, 4 traps-Stoneville, 2 traps-Arlington, 3 traps-Theresa.

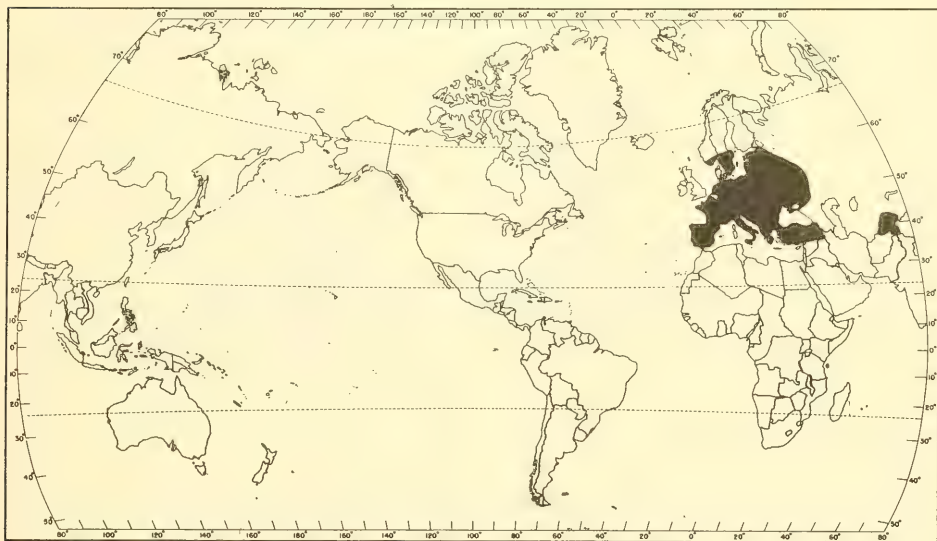
INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

EUROPEAN CHERRY FRUIT FLY (Rhagoletis cerasi L.)

Economic Importance: This tephritid is considered to be one of the most serious pests of cherries in Europe. It frequently causes severe damage in central European countries and in recent years has caused severe damage in southern Norway. In Bulgaria in 1929, from 80 to 100 percent of the fruit was damaged in many instances. Infestations in Norway are frequently over 90 percent. Considerable loss occurs in the preserve industry in Germany and further loss is realized in this country from cherry import restrictions operating in Great Britain and other countries. In the past few years it has been intercepted in increasing numbers at U. S. ports of entry. As many as 31 interceptions have been reported at Atlantic Coast ports in a season.

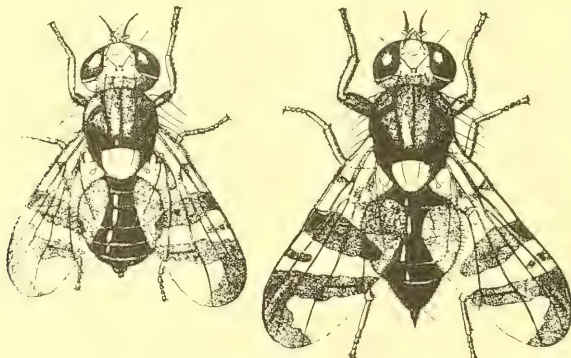
Hosts: The major host is cherry, but it will also attack several other species of *Prunus*. *Lonicera tatarica* and *L. xylosteum* appear to be important alternate hosts, though they are not preferred.

Distribution: Occurs throughout most of Continental Europe and parts of Turkey in Asia. In USSR extends from southern Leningrad province to the Crimea and in southeastern Kazakhstan.

General Distribution of Rhagoletis cerasi

Life History and Habits: In France the adults emerge from the overwintering pupal cases in early May. They begin feeding shortly afterward upon the secretions on the tree. Unfed females cannot become sexually mature. Newly emerged adults are sluggish and are easily captured. Weather greatly influences the activity of the adults. They remain immobile on cold cloudy days. In about 11 days the females begin laying eggs in fruits, each laying from 50 to 60 with a maximum of 100. The eggs are placed beneath the epidermis, usually one per fruit. Incubation lasts from 6 to 12 days, varying with temperature. Larval development averages 30 days. When mature, the larvae leave the fruit and enters the soil to pupate. The puparia remain in the soil until the following May, some pupae remain for a second year. Larvae hatching in green fruit rapidly die, but thrive in mature fruit and tunnel toward the center. The tissue around the oviposition scar in infested fruit becomes soft and brownish.

Description: The adult is small, 3.5 to 4 mm. long; almost entirely black; head large, clear yellow anteriorly and dusky on lower face. Face not keeled. Frons little larger than one eye, seen from below. Ocelli triangle, brown; antennae colorless. Chaetae and bristles of head very short. Thorax black with exception of brilliant lateral line. In addition, anterior part of thorax with two brownish longitudinal bands and sides of shield with black spots. Abdomen black, ornamented by marginal hairs on last segments. Femora black, tibiae and tarsi yellow except posterior pair which darken toward middle. Wing with characteristic design. (See illustration of adults). Bands and markings of wings blackish. Males distinguished from females principally by elongation of fifth abdominal segment and absence of ovipositor. Mature larvae white, 2.5 mm. long. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies.) CEIR 8(30) 7-25-58



Adults of Phagoletis cerasi

Figures (except map) from Norge, I. 1951. Melding fra Statens Plantevern 5, 35 pp.

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PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GRASSHOPPERS moving into fields in North Dakota with some crop injury and some damage in areas of South Dakota. Populations somewhat higher than in 1957 in areas of Oklahoma. Damaged crops in New Mexico and heavy on pasture land in California. (p. 667).

EUROPEAN CORN BORER larval counts high in northeast and central Nebraska. (p. 668). CORN EARWORM heavy in sorghum in some Arkansas areas. (p. 668).

FALL ARMYWORM heavy in several crops in various states. GARDEN WEBWORM outbreak in southeastern Missouri, heavy and damaging in areas of Arkansas. (p. 669).

HESSIAN FLY survey in Nebraska indicates heaviest infestation since 1952. (p. 670).

PEAR PSYLLA more abundant than usual in Willamette Valley, Oregon. (p. 674).

GARDEN FLEAHOPPER losses to melons extensive in areas of Indiana. (p. 675).

Worst BOLLWORM infestation on record in Georgia continued to cause severe damage. (p. 676). Main problem in cotton in Texas areas, damage statewide in South Carolina. (p. 677).

EUROPEAN EARWIG heavy in many areas of Idaho, abundant in areas of Massachusetts. (p. 680).

JAPANESE BEETLE active throughout its range. (pp. 675, 681).

CORRECTIONS. (p. 681). ADDITIONAL NOTES. (p. 682).

WEATHER OF THE WEEK ENDING JULY 28

Frequent showers and thunderstorms, high relative humidity, and abnormally low weekly average temperatures in most interior areas were the weather pattern east of the Rockies. In the Far West, precipitation was limited to widely scattered, mostly light showers, while temperatures for the week averaged a few degrees below normal in interior sections and above in Washington State and along the Pacific Coast. Thundershowers east of the Rockies generally maintained adequate to excessive soil moisture. The principal exceptions were a continued shortage in northeastern Montana, a need for more rain in the southern low rolling plains of Texas, in a few counties of south central Virginia and in parts of Michigan. Total rainfall for the week was heaviest in sections of the central Great Plains and in the Ohio and middle and lower Mississippi Valleys where many stations reported weekly totals ranging from 3 to over 5 inches. Winnfield, Louisiana, reported the heaviest total, 10.77 inches, of which 10 inches fell during the night of the 21st and 22nd. Floods along many streams from Kansas to West Virginia are causing locally heavy crop losses; and wet weather during the past 3 to 6 weeks has delayed cultivation of row crops and weeds are becoming a problem.

Although severe storms were not numerous during the week, tornadoes destroyed some farm buildings near Akron, Colorado, and between Newark and Newcomerstown, Ohio. A windstorm on the 27th in eastern Maryland, near Worcester, took a heavy toll of chickens and caused some other property damage, with total losses estimated at \$70,000. Dry weather continued the high fire hazard in much of the Far West, but no serious forest fires have been reported. Recently 20,000 acres of range were burned over in Boxelder County, Utah, and lightning started several range fires in Idaho and a number of forest fires in northern California. (Summary supplied by U. S. Weather Bureau.)

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - ALABAMA - *Romalea microptera* increasing in southern part of State. (K. Hays, July 21). ARKANSAS - Outbreak reported in Carroll County. (Ark. Ins. Rpt.). MINNESOTA - Generally low in southeast district. Averaged 12, 25 and 30 per square yard in 3 locations in central district, with first to third-instar nymphs of *Melanoplus femur-rubrum* dominant species. Non-economic in west central district except along roadsides and in some fields in Lac qui Parle and Yellow Medicine Counties, with 50-60 per square yard in 2 Yellow Medicine County fields, *M. femur-rubrum* first to third-instar nymphs dominant. One report of 27 per square yard from Chippewa County. (Minn. Ins. Rpt.). WISCONSIN - Considerable variability in populations between alfalfa fields in same locality. Averaged 10 per square yard in some Wood County fields, but 25 per square yard were common in fields in Portage, Waushara and Marquette Counties, July 18. Up to 5 per square yard in fields checked in Sauk, Iowa, Richland and Vernon Counties, with almost none in 30 percent of these fields, July 21. Hatching has begun in Dane, Crawford, Vernon and Richland Counties, with 12-15 first-instar nymphs per square yard in some fields. On same date, fields examined in Sauk and Monroe Counties averaged as many as 27 second and third-instar nymphs per square yard. (Wis. Coop. Sur.). NORTH DAKOTA - Moving into fields with crop injury noticeable in margins. *M. bivittatus* adults light to threatening at several places in Williams, Divide, Burke and Renville Counties. (N. D. Ins. Rpt.). SOUTH DAKOTA - Adults of *M. bilituratus* heavy in Nemo area, Lawrence County, and South Canyon area, Pennington County. Spraying continued in Bennett-Shannon-Washabaugh area, with emphasis on roadsides. Some crop damage in Yankton and Clay Counties, with averages of 35-40 per square yard in alfalfa and 50-75 in field margins. *M. differentialis* and *M. bivittatus* dominant species in this area. (Burge, King). NEBRASKA - *M. bilituratus* and *M. bivittatus* mating in north central section. Complex of first to fourth-instar nymphs of *M. femur-rubrum* and *M. differentialis* ranged 10-35 per square yard in alfalfa field margins. (Roselle). In southwestern wheat and wheat stubble counts ranged from 5-54 per square yard in margins, up to 10 fields, predominantly *M. bilituratus*, *M. angustipennis* and *M. foedus*. (Andersen). OKLAHOMA - Range, roadside and marginal populations in eastern and northeastern sections somewhat higher than in 1957. Nymphs and adults generally 4-10 per square yard on range. Predominant species in eastern half of State include *M. bivittatus*, *M. femur-rubrum*, *Ageneotettix deorum* and *Mermiria* spp. Second-generation *Melanoplus* spp. in several locations. (Coppock).

UTAH - Becoming more serious at Circleville, Marysvale and Junction, Piute County. (Knowlton). Severe on 7,000 acres on Fountain Green Ridge, Sanpete County. *C. pellucida* severe on 7,000-acre area of meadow in Manti-Ephraim-Wales area, same county. (Thornley, Knowlton). IDAHO - Up to 8 nymphs per sweep in red clover and alfalfa fields sampled in Canyon County. (Waters). NEW MEXICO - *M. differentialis* and *M. bivittatus* damaged corn and alfalfa in Valencia, Sandoval and Bernalillo Counties. Destroying gardens in many areas of State. (N. M. Coop. Rpt.). CALIFORNIA - *Melanoplus* spp. heavy on pasture land, Dixon area of Solano County. *Trimerotropis* sp. medium, adults flying into Hemet, Riverside County. *Camnula pellucida* and *M. devastator* medium on rangelands in Irvine area, Orange County, and latter species heavy in Vacaville area, Solano County. *C. pellucida* as high as 40 per square yard on rangelands, San Diego and Riverside Counties. (Cal. Coop. Rpt.).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - MASSACHUSETTS - First brood generally light and late. (Wheeler). DELAWARE - Hatching throughout State. (MacCreary, Conrad). MARYLAND - Infestations low in Queen Annes and Frederick Counties. Egg laying common on corn adjacent to maturing potato fields. (U. Md., Ent. Dept.). ALABAMA - Egg deposition on field corn continued in northern areas. (Grimes). MINNESOTA - Infestation continued low, with highest count of 33 percent in southwest district. Most larvae in first and third instars, with up to fifth instar in southern district. No pupation reported. (Minn. Ins. Rpt.). WISCONSIN - Limited chiefly to early and advanced plantings in southern counties, with percentage of infested plants not high, ranging 25-35 percent. Higher in canning sweet corn in area west of southern end of Lake Winnebago. Most larvae in third and fourth instars. *Lydella grisea* observed in larvae and pupae in Dane County. (Wis. Coop. Sur.). ILLINOIS - Populations generally low. Averaged 0.8-47 per 100 plants. (Ill. Ins. Rpt.). IOWA - First brood pupation 34 percent at Ankeny. Situation same as in 1957 in Boone County, with 6 percent pupation and 78 percent fifth-instar larvae. In these randomly selected fields, 64 percent of plants averaged 89 larvae per 100 plants. Warmer weather has been favorable for development. (Iowa Ins. Inf.). INDIANA - Averaged one third-instar first-brood larva per stalk in earliest corn in east central section, with only 3 percent infestation. Counts slightly higher in northern section. (Lehker, Wilson). ARKANSAS - Egg deposition continued. Occurrence appears light in some areas, heavy in others. Third and fourth-instar larvae in Desha County. (Ark. Ins. Rpt.). MISSOURI - Larvae on early-planted corn in Carroll County were 53 percent mature, with 38 percent pupation and 4 percent emergence. No second-generation egg laying observed. (Peters, Munson). NEBRASKA - Second to fifth-instar larvae heavy in early planted corn, with 500-880 per 100 plants in northeast section, and 300-600 per 100 plants in north central section. In southeast section, third and fifth-instar larvae ranged 260-450 per 100 plants, with a few pupae found. (Andersen, Roselle).

ARMYWORM (*Pseudaletia unipuncta*) - PENNSYLVANIA - General in corn and hay. Sporadic in some instances, with some damage. (Udine). MINNESOTA - Only 2 fields reported treated in northwest district July 19-25. Occasional barley fields show small number of larvae in lodged areas. Considerable numbers of moths taken in light traps at Worthington and Fergus Falls. Counts higher than any time in 1958. (Minn. Ins. Rpt.). WISCONSIN - Light feeding in many corn fields has subsided in southern sections. No damage in small grain reported from this area. Reported in dense growth alfalfa-brome grass fields in Barron and Monroe Counties. (Wis. Coop. Sur.).

BEEF ARMYWORM (*Laphygma exigua*) - OREGON - Large numbers, probably this species, in localized areas of Willamette Valley damaged corn and beets. Control effective and little crop loss anticipated. Presence unusual in this area. (Crowell).

CORN EARWORM (*Heliothis zea*) - MASSACHUSETTS - Almost absent from early plantings. (Wheeler). GEORGIA - Light on peanuts, Tift, Colquitt and Cook Counties. (Johnson). LOUISIANA - Light in grain sorghum in Tensas and Franklin Parishes. (Spink). OKLAHOMA - Larvae averaged 2-3 per ear on field corn, Craig County. General infestation lighter than in last two years. (Coppock). TEXAS - Averaged 6-27 larvae per head in grain sorghum, McLennan and Burleson Counties. (Randolph). ARKANSAS - Infestations heavy in grain sorghum in some areas. (Ark. Ins. Rpt.). WISCONSIN - Third and fourth-instar larvae found in planting of early sweet corn in Dane County. (Wis. Coop. Sur.). NEW MEXICO - Heavy on field corn and generally heavy on sweet corn throughout State. (N. M. Coop. Rpt.). WASHINGTON - Abundant, caused early severe damage to corn. (Brannon). UTAH - Infesting some corn in the Uintah Basin. (Knowlton). WEST VIRGINIA - Averaged 5 percent infestation in harvested ears of sweet corn in Hancock County. (W. Va. Ins. Sur.).

FALL ARMYWORM (*Laphygma frugiperda*) - DELAWARE - Heavy in late field corn, southeastern Sussex County. Larvae averaged one per 10 sweeps in alfalfa, statewide. (MacCreary, Conrad). MARYLAND - Half-grown larvae heavy in late corn in Fairland and Beltsville, with 58 percent of stalks infested. These are the first of the season. (U. Md., Ent. Dept.). VIRGINIA - Damaged corn in Middlesex County. (Morris, Debush). TENNESSEE - Heavy in Monroe County, averaged 20-30 larvae per square foot in barley and Sudan grass. (Bennett). GEORGIA - Moderate to heavy on corn, Lanier, Lowndes, Cook, Colquitt and Mitchell Counties. (Johnson). LOUISIANA - Heavy in late corn, Caddo Parish. Averaged 30 per square foot in local infestation of grass, St. Helena Parish. (Spink). TEXAS - Averaged 1-5 larvae per stalk on grain sorghum, Burleson County. (Randolph). ARKANSAS - Heavy in grain sorghum in some areas. (Ark. Ins. Rpt.). ILLINOIS - Few reports of light infestations in northern and southern sections of State. (Ill. Ins. Rpt.). MISSOURI - Larvae light on late-planted corn in scattered fields over southwest area. (Kyd, Thomas).

GARDEN WEBWORM (*Loxostege similalis*) - ARKANSAS - Heavy in grain sorghum in some areas. Damaged young soybeans in several areas of State. (Ark. Ins. Rpt.). ILLINOIS - Caused light damage in occasional southern alfalfa and soybean fields. (Ill. Ins. Rpt.). MISSOURI - Very heavy outbreak occurred on alfalfa, late planted soybeans and cotton over much of extreme southeast area. Moths very numerous over much of remainder of State. Damaging larval infestations can be expected during next 7-14 days. (Kyd, Thomas).

NORTHERN CORN ROOTWORM (*Diabrotica longicornis*) - MISSOURI - Adults very numerous, feeding heavily on silks of field corn in widely scattered fields over southeast area. Lodging in small spots throughout several fields. (Kyd, Thomas).

SOUTHWESTERN CORN BORER (*Zeadiatraea grandiosella*) - ARKANSAS - Egg laying continued in Newton County area, and areas northwest of White County. South of these counties most eggs have hatched. In Arkansas Valley, infestation appears lighter than originally expected. (Ark. Ins. Rpt.). LOUISIANA - Heavy in late corn, Caddo Parish. (Spink). OKLAHOMA - Second-generation larvae in corn, Stillwater area. (Arbuthnot, Walton). NEW MEXICO - Medium to heavy in field corn, Curry and Quay Counties. (N. M. Coop. Rpt.).

CHINCH BUG (*Blissus leucopterus*) - OKLAHOMA - Light on corn and early-planted sorghum in northeastern areas; somewhat heavier on late-planted sorghum, up to 30 per plant. (Coppock).

BROWN STINK BUG (*Euschistus servus*) - ALABAMA - Moderate on corn in Etowah County. (Grimes).

A STINK BUG - TEXAS - Heavy on heads of milo in Motley County. (Hawkins).

CORN LEAF APHID (*Rhopalosiphum maidis*) - DELAWARE - Large numbers in tassels of field corn, eastern Sussex County. (MacCreary, Conrad). WEST VIRGINIA - Infested 100 percent of 15 acres of sweet corn in Hancock County. (W. Va. Ins. Sur.). ILLINOIS - Numerous on 0-20 percent of corn tassels in eastern section, lighter in northern and western corn fields. (Ill. Ins. Rpt.). OHIO - Severe in field corn in 3 northwestern counties. (Neiswander). NEBRASKA - Light in corn and sorghum in eastern third of State. (Andersen, Roselle). OKLAHOMA - Light in sorghum, eastern and northeastern counties. (Coppock). WISCONSIN - In corn beginning to tassel. (Wis. Coop. Sur.). UTAH - Damaged late spring barley in several counties. Effectively controlled by lady beetles and damsel bugs in many fields where barley is well headed out. (Knowlton).

A GRASS MITE (*Oligonychus stickneyi*) - NEW MEXICO - Medium to heavy on field corn in Valencia, Bernalillo, Sandoval, Dona Ana and Socorro Counties, and light to extremely heavy on sweet corn in the first four named counties. (N. M. Coop. Rpt.).

HESSIAN FLY (Phytophaga destructor) - NEBRASKA - Survey continued. Present data indicates heaviest infestation since 1952. If weather conditions continue favorable for development, there is an even chance of an outbreak this year. (Andersen).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - UTAH - Common on alfalfa throughout State, but rarely conspicuously damaging. (Knowlton). NEBRASKA - Averaged 12 per 100 sweeps in southeastern portion of State. (Andersen). WYOMING - Adults numerous in several alfalfa fields in Worland area, Washakie County. No damage noted. (Davison).

ALFALFA WEEVIL (Hypera postica) - WYOMING - Caused minor damage to second-cutting alfalfa, Goshen and Lincoln Counties. (Davison). SOUTH DAKOTA - Averaged 26 adults and 81 larvae per 100 sweeps in scattered alfalfa fields throughout Black Hills area. Heavy leaf damage in some places. (Hantsbarger). MASSACHUSETTS - Larvae on second-cutting alfalfa in Barnstable County. Now in all counties in State. (Wheeler).

BLISTER BEETLES - NEBRASKA - Epicauta sp., E. fabricii and E. pennsylvanica averaged 14 per 100 sweeps in alfalfa in southeast part of State. (Andersen). DELAWARE - Epicauta sp. fairly common on soybeans, eastern Kent County. (MacCreary, Conrad).

CLOVER APHID (Anuraphis bakeri) - IDAHO - Appeared in all red clover seed fields in southwest section, but no heavy infestations noted. (Waters).

CLOVER ROOT CURCULIO (Sitona hispidula) - MASSACHUSETTS - Averaged 7 larvae and 8 pupae per square foot in alfalfa. (Lavigne).

CUTWORMS (probably Feltia sp.) - LOUISIANA - Heavy but spotty in alsike clover and Bahia grass pastures in St. Tammany Parish. (Spink).

FALSE CHINCH BUG (Nysius ericae) - IDAHO - Locally abundant in alfalfa and grasses in Blaine and Franklin Counties. (Eakin, Johnson, Smith). UTAH - Vast numbers near Manti, Sanpete County, and at Laketown, Rich County. (Knowlton). CALIFORNIA - Heavy on weed hosts in Wheeler Ridge area, Kern County, adjacent to truck crops and cotton. (Cal. Coop. Rpt.). WYOMING - Some damage to tips of alfalfa in Douglas area, Converse County. (Davison).

GREEN CLOVERWORM (Plathypena scabra) - NEBRASKA - Light in alfalfa and soybeans in southeast section, 9 per 100 sweeps in alfalfa. (Andersen). DELAWARE - Common on alfalfa and red clover in one area of New Castle County. (MacCreary, Conrad).

LYGUS BUGS (Lygus spp.) - DELAWARE - L. lineolaris common to prevalent on alfalfa and red clover statewide. (MacCreary, Conrad). MISSOURI - Nymphs of L. lineolaris very numerous on alfalfa over northeast area, 2-14 per sweep. (Kyd, Thomas). IDAHO - Mostly L. hesperus and L. elisus averaged 2-8 per sweep in many alfalfa seed fields in Canyon County. (Waters). WASHINGTON - Nymphs light in alfalfa grown for seed at Brownstown, Yakima County. (Landis). UTAH - Abundant in some first-crop alfalfa seed fields, Duchesne and Uintah Counties. (Knowlton). COLORADO - L. elisus and L. hesperus averaged 100-200 per 100 sweeps in alfalfa seed fields in Mesa County, and 200 per 100 sweeps in alfalfa hay fields, Mesa, Delta and Garfield Counties. (Exp. Sta.). NEW MEXICO - L. hesperus and L. elisus heavy in most alfalfa fields in southern half of State and caused damage in Dona Ana, Eddy, Chaves and Quay Counties where no controls were applied. (N. M. Coop. Rpt.).

POTATO LEAFHOPPER (*Empoasca fabae*) - MASSACHUSETTS - Relatively light in alfalfa. (Wheeler). DELAWARE - Nymphs and adults rather heavy in alfalfa in some areas. (MacCreary, Conrad). MARYLAND - Averaged 6 per sweep on over-grown alfalfa, Frederick and Howard Counties. Some damage. (U. Md., Ent. Dept.). MICHIGAN - Adults scarce in alfalfa and potato fields in all areas sampled. (Hutson). MISSOURI - Some slight yellowing of alfalfa occurred over northeast area. Averaged 1-7 per sweep. (Kyd, Thomas).

PEA LEAF WEEVIL (*Sitona lineata*) - OREGON - Injured legumes in Polk and Yamhill Counties. In combination with *Diabrotica undecimpunctata*, caused considerable damage where not controlled. (Dickason, Every).

SIX-SPOTTED LEAFHOPPER (*Macrosteles fascifrons*) - CALIFORNIA - Heavy on clover and trefoil pastures in Dixon area, Solano County. (Cal. Coop. Rpt.). COLORADO - Light trap collections indicate very slight or very little increase. (Exp. Sta.).

SAY STINK BUG (*Chlorochroa sayi*) - NEW MEXICO - Medium in alfalfa seed fields in Eddy County. (N. M. Coop. Rpt.). UTAH - Heavy migration to crops throughout Salt Lake and eastern Tooele Counties. Noticeably reduced wheat yields in some Emery County fields. (Knowlton).

PLANT BUGS (*Adelphocoris* spp.) - DELAWARE - *A. lineolatus* and *A. rapidus* prevalent in alfalfa in some areas. (MacCreary, Conrad).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - NEW MEXICO - Light with occasional heavy spotty infestations in alfalfa in Socorro, Dona Ana, Eddy and Chaves Counties. (N. M. Coop. Rpt.). COLORADO - Averaged 250 per 100 sweeps in Baca County, 15-150 in Prowers County, 5 in Bent County, 4-120 in Otero County, 0 in Pueblo and Weld Counties, July 19. None taken in Garfield, Delta and Montrose Counties to July 18. (Exp. Sta.). OKLAHOMA - Increased in a few alfalfa fields in east central counties; however, over-all picture there and in northeast section remains light to very light. (Coppock).

PEA APHID (*Macrosiphum pisi*) - MARYLAND - Caused injury to second-cutting alfalfa, Frederick County. Some control applied, numbers now few. (U. Md., Ent. Dept.). MINNESOTA - Populations in alfalfa lower. (Minn. Ins. Rpt.). SOUTH DAKOTA - Up to 100 per sweep in some alfalfa fields in western areas. Predators abundant and reducing populations. (Hantsbarger). NEBRASKA - Extremely low in northeast and southeast sections in comparison to former weeks. (Andersen, Roselle). OKLAHOMA - Increased in some east central area alfalfa fields, up to 50 per 100 sweeps. (Coppock). IDAHO - Gradually building up in alfalfa seed fields in Canyon and Owyhee Counties, with up to 40 per sweep in many Canyon County fields. (Waters). UTAH - Building up to threatening numbers in several areas of State. Control applied in a number of Millard and Weber County fields, required in parts of other counties. (Knowlton). COLORADO - Averaged 50-100 per 100 sweeps in several counties, with 100-200 per 100 sweeps in river bottom fields. (Exp. Sta.).

CHINCH BUGS - ALABAMA - *Blissus leucopterus insularis* heavy in St. Augustine grass lawns in Escambia County. (Grimes, July 11). GEORGIA - *Blissus* sp. infesting lawns in Lowndes County. (Johnson).

WEEVILS - CALIFORNIA - *Apion proclive* medium on alfalfa and cotton in Bakersfield area, Kern County. (Cal. Coop. Rpt.). TEXAS - *Anacetrinus deplanatus* infesting 25-100 percent of sugarcane plants in McLennan County. (Randolph).

RED-NECKED PEANUTWORM (Stegasta basqueella) - OKLAHOMA - Second-generation moths emerging in Payne and Caddo Counties. Second-generation larvae damaged 12-16 percent of peanut shoots in same areas. (Coppock).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - TEXAS - Medium on peanuts in Frio County. (Harding).

THRIPS - NEW MEXICO - Heavy in most alfalfa seed fields in Eddy County. (N. M. Coop. Rpt.). OKLAHOMA - Damage to peanuts light in Payne and Caddo Counties. (Walton).

WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata) - OREGON - Large numbers in alfalfa fields in Polk and Yamhill Counties. In combination with Sitona lineata, caused considerable damage where not controlled. (Dickason, Every).

WEBWORMS (Loxostege spp.) - OKLAHOMA - Light damage to few alfalfa fields, Muskogee and Tulsa Counties; however, counts being reduced, with 2-16 per 10 sweeps. (Coppock). MISSOURI - Caused serious injury to soybeans, cotton and other crops in southeastern counties. (Kydt, Thomas). COLORADO - L. commixtalis larvae averaged 2-3 per alfalfa crown in Wellington area, Larimer County, with noticeable damage. (Exp. Sta.). UTAH - L. sticticalis caused local injury to alfalfa in some Emery, Duchesne, Carbon and Uintah County fields. (Knowlton).

SPIDER MITES - IDAHO - Tetranychus spp. becoming serious in some untreated red clover and alfalfa seed fields in southwest section. (Waters).

SPITTLEBUGS - WISCONSIN - Large numbers of adults in many alfalfa fields. (Wis. Coop. Sur.).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - TEXAS - Heavy on alfalfa in Burleson County. (Randolph). LOUISIANA - Averaged 118 per 25 sweeps in 4 alfalfa fields, Caddo and Bossier Parishes. (Spink). OKLAHOMA - Common in alfalfa throughout State. (Coppock).

A COTTONY GRASS SCALE - SOUTH DAKOTA - Reported on wheatgrass from many western areas. (Hantsbarger).

FRUIT INSECTS

APPLE MAGGOT (*Rhagoletis pomonella*) - MICHIGAN - Adults very spotty in occurrence. (Hutson). MASSACHUSETTS - Adults easily found in orchards. (Wheeler). NEW YORK - Probable peak of emergence occurred July 24 in eastern area. Numbers increasing in Monroe County. (N. Y. Wkly. Rpt.). WISCONSIN - Traps indicating presence in southern orchards. (Wis. Coop. Sur.). MINNESOTA - Damage appearing. Emergence continues and protection still needed in all areas. (Minn. Ins. Rpt.).

CODLING MOTH (*Carpocapsa pomonella*) - MICHIGAN - Indications peak summer brood population will be late by 10 days. Spring brood has not emerged normally. (Hutson). MARYLAND - First-brood emergence extended at Hancock, no second-brood larvae. (U. Md., Ent. Dept.). MASSACHUSETTS - Second-brood entries in late and early orchards. (Crop Pest Cont. Mess.). NEW MEXICO - Heavy in unsprayed apples but generally light in sprayed orchards. (N. M. Coop. Rpt.). INDIANA - Second-brood entries very light in Vincennes area. (Hamilton).

ORCHARD MITES - MARYLAND - *Tetranychus telaris* and *Panonychus ulmi* increasing on apple at Hancock, some bronzing. (U. Md., Ent. Dept.). OHIO - *T. telarius* declining on peaches at Wooster but *P. ulmi* increasing. (Rings). NEW MEXICO - *T. mcDanieli* heavy in untreated orchards. (N. M. Coop. Rpt.). NEW YORK - Heavy infestations of red mites on some varieties of apples in Orleans County. (N. Y. Wkly. Rpt.). INDIANA - *P. ulmi* has built up in past 10 days in spite of rain in Vincennes area. *T. telarius* also increased and warrants control in some orchards. (Hamilton). NEW JERSEY - *P. ulmi* numerous in some orchards. (Ins. Dis. Newsl.). CALIFORNIA - Moderate infestation of peaches in areas of Yuba and Sutter Counties. (Cal. Coop. Rpt.).

PLUM CURCULIO (*Conotrachelus nenuphar*) - OHIO - First adults of summer brood emerged July 21. Larval emergence from drop fruits completed. (Rings). GEORGIA - Second-generation larvae appeared in harvested peaches at Fort Valley, July 18. (Snapp).

RED-BANDED LEAF ROLLER (*Argyrotaenia velutinana*) - OHIO - Second-brood larvae about half grown in Columbus and Wooster areas. Damaging plum where fruit clustered in Clyde area. (Rings). MASSACHUSETTS - Second-brood larvae found July 21. (Wheeler).

ORIENTAL FRUIT MOTH (*Grapholitha molesta*) - OHIO - Second-brood larvae maturing, no pupation in Wayne County. (Rings). INDIANA - Bait trap captures indicate that second-brood adults were emerging between July 18-21 in Vincennes area. (Hamilton).

APPLE APHID (*Aphis pomi*) - MICHIGAN - Reports from several areas. (Hutson). MARYLAND - Heavy at Hancock but no damage. Parasites effective. (U. Md., Ent. Dept.). MASSACHUSETTS - Remains problem in some blocks because of succulent growth. (Wheeler). NEW YORK - Building up in Wayne and Oswego Counties. (N. Y. Wkly. Rpt.). NEW JERSEY - Numerous inside of trees in southern counties. (Ins. Dis. Newsl.).

PEAR-SLUG (*Caliroa cerasi*) - CALIFORNIA - Generally light to heavy on cherry trees in Mount Shasta area of Siskiyou County. (Cal. Coop. Rpt.).

WESTERN CHERRY FRUIT FLY (*Rhagoletis cingulata indifferens*) - IDAHO - Light infestation, about 1 percent, in cherries at Emmett, first record for Gem County. (Scott). CALIFORNIA - Incipient infestation on cherries on a property in Weitchpec, Humboldt County. First larval record for county. (Cal. Coop. Rpt.).

EUROPEAN APPLE SAWFLY (*Hoplocampa testudinea*) - MASSACHUSETTS - Reported from new areas of Middlesex County. (Wheeler).

PEAR PSYLLA (*Psylla pyricola*) - OREGON - More abundant than usual in Willamette Valley. Growers report control more difficult this season. (Every).
WASHINGTON - Adults of third generation at peak at Wenatchee. (Kelly).

APPLE AND THORN SKELETONIZER (*Anthophila pariana*) - INDIANA - Extensive damage to unsprayed apples and ornamental crabapples in Fort Wayne area, July 21. (Lehker).

SAN JOSE SCALE (*Aspidiotus perniciosus*) - NEW MEXICO - Heavy, spotty infestations on apples in Sandoval County. (N. M. Coop. Rpt.).

WALNUT CATERPILLAR (*Datana integerrima*) - OKLAHOMA - Severe defoliation to native pecans in some counties. Now pupated. (Coppock). TEXAS - Heavy on pecans in Mason County. (Garrett).

RED-HUMPED CATERPILLAR (*Schizura concinna*) - CALIFORNIA - Heavy populations on English walnut in Visalia area, Tulare County. (Cal. Coop. Rpt.).

CALIFORNIA RED SCALE (*Aonidiella aurantii*) - CALIFORNIA - Heavy on citrus in Orland, Glenn County. (Cal. Coop. Rpt.).

TRUCK CROP INSECTS

BEEET ARMYWORM (*Laphygma exigua*) - CALIFORNIA - Medium on tomatoes in San Joaquin, Sacramento, Sutter, Yuba and Yolo Counties, and heavy on sugar beets in Colusa area, Colusa County. (Cal. Coop. Rpt.).

BEEET LEAFHOPPER (*Circulifer tenellus*) - IDAHO - Summer brood maturing rapidly. (T.F.F.S.). COLORADO - Curly top of concern, particularly in tomatoes in western and eastern counties. July 19 report on situation in sugar beets indicates epidemic season. (Exp. Sta.).

BEEET WEBWORM (*Loxostege sticticalis*) - NORTH DAKOTA - Scattered infestations in sugar beets in Red River Valley. (N. D. Ins. Rpt.). IDAHO - Total of 205 adults in one light trap at Parma, July 16. (Waters).

APHIDS - MAINE - Potato-infesting aphids on untreated plantings in Presque Isle area continue to increase rapidly although populations are still small. (Shands).

COLORADO POTATO BEETLE (*Leptinotarsa decemlineata*) - WASHINGTON - Damaged potatoes at Othello. (Brannon). More widespread in Yakima Valley and Columbia Basin, but damage less severe than in 1957. (Dailey). DELAWARE - Very heavy feeding on planting of potatoes and tomatoes in some areas. (MacCreary, Conrad).

POTATO PSYLLID (*Paratrioza cockerelli*) - COLORADO - Adults running from 0-5 per sweep on potatoes. Yellows symptoms appearing in potatoes and tomatoes. (Exp. Sta.). WYOMING - One adult per 100 sweeps on matrimonyvine in Rock Springs area. (Davison).

TOMATO RUSSET MITE (*Vasates lycopersici*) - CALIFORNIA - Generally moderate to heavy on tomatoes in San Joaquin, Sacramento, Sutter, Yuba and Yolo Counties. Control necessary in some locations. (Cal. Coop. Rpt.).

HORNWORMS (*Protoparce* spp.) - NEW MEXICO - Light to medium on chili in Sandoval and Valencia Counties. Adults numerous in Sandoval County. (N. M. Coop. Rpt.).

A TORTOISE BEETLE (Plagiometriona diversicollis) - NEW MEXICO - Light to moderate and caused spotty damage to chili in Sandoval, Valencia and Grant Counties. (N. M. Coop. Rpt.).

BEAN APHID (Aphis fabae) - MICHIGAN - Reported on beans at Midland, Owosso, Bay City and Pigeon. (Hutson).

MEXICAN BEAN BEETLE (Epilachna varivestis) - DELAWARE - Adults and larvae feeding commonly on many lima and snap bean plantings throughout Sussex County. (MacCreary, Conrad). COLORADO - Hatching in Mesa County, controls applied. Light in Montrose County. (Exp. Sta.). NEW YORK - Abundant in Erie County. (N. Y. Wkly. Rpt.).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - WASHINGTON - Light on dry beans, generally restricted south and west of Quincy. (Landis).

CABBAGE MAGGOT (Hylemya brassicae) - CALIFORNIA - Heavy on turnips at Richmond, Contra Costa County. (Cal. Coop. Rpt.). MASSACHUSETTS - Second brood has caused noticeable damage. (Wheeler).

CABBAGE LOOPER (Trichoplusia ni) - DELAWARE - Small larvae on peppers, southwestern Sussex and northern Kent Counties, common on peppers central Sussex County. Common on late potatoes and on cabbage, eastern Kent County. (MacCreary, Conrad). MASSACHUSETTS - Building up. (Wheeler).

IMPORTED CABBAGEWORM (Pieris rapae) - DELAWARE - Heavy on young cabbage in Kent County. (MacCreary, Conrad).

BROWN WHEAT MITE (Petrobia latens) - IDAHO - Becoming troublesome on onions in Canyon County. (Scott).

ONION MAGGOT (Hylemya antiqua) - MASSACHUSETTS - Damage heaviest in 10 years on "sets" being harvested. (Wheeler).

ONION THRIPS (Thrips tabaci) - IDAHO - Economic numbers on many southwestern onion fields. (Gittins). NEW MEXICO - Very heavy on onions in Sandoval County. (N. M. Coop. Rpt.).

JAPANESE BEETLE (Popillia japonica) - DELAWARE - Prevalent on asparagus ferns in some areas. (MacCreary, Conrad).

STRIPED CUCUMBER BEETLE (Acalymma vittata) - DELAWARE - Prevalent in pumpkin-squash flowers, north central Kent County. (MacCreary, Conrad).

TOBACCO THRIPS (Frankliniella fusca) - MICHIGAN - Very numerous and caused damage on some fields of pickling cucumbers at Shelby, Holland and Manistee. (Hutson).

WESTERN STRIPED CUCUMBER BEETLE (Acalymma trivittata) - OREGON - In a small planting of squash and cucumbers in Corvallis. Last seen in the Willamette Valley in 1947. (Crowell). NEW MEXICO - This species and Diabrotica sp. medium to heavy on cantaloup, squash and cucumbers in Socorro, Valencia and Sandoval Counties. (N. M. Coop Rpt.).

GARDEN FLEAHOPPER (Halticus bracteatus) - INDIANA - Adults in large numbers moved into southwestern watermelon and muskmelon fields, with extensive losses in some fields. (Gould, July 14).

MELON APHID (Aphis gossypii) - MICHIGAN - On melons at Stevensville and on melons and cucumbers at Bay City. (Hutson). DELAWARE - Small colonies forming on peppers in southwestern Sussex County. (MacCreary, Conrad).

STRAWBERRY LEAF ROLLER (*Ancylis comptana frageriae*) - WASHINGTON - Damaged strawberries in Thurston and Cowlitz Counties. (Brannon).

A LOOPER (*Rachiplusia ou*) - MICHIGAN - Defoliated mint in localized areas about Stockbridge and Jonesville. (Hutson).

SLUGS - MASSACHUSETTS - More abundant than usual. (Wheeler).

TOBACCO INSECTS

GREEN PEACH APHID (*Myzus persicae*) - NORTH CAROLINA - Increasing on tobacco but not of economic importance to date in Granville County. (Chamberlin).
 VIRGINIA - Probably this species, medium and attacking top tender leaves of tobacco on several farms in Nottoway County (Cassell).

COTTON INSECTS

BOLL WEEVIL (*Anthonomus grandis*) - ALABAMA - Increasing in north and north central areas. Counts ranged 2-50 percent in 44 fields. May be serious problem in the area if same weather conditions continue. (Grimes).
 GEORGIA - Square counts in 34 fields in middle and southern areas ranged 6-81 percent with average of 35 percent punctured squares. (Johnson). Large increase of first-generation weevils in many fields of south Georgia. (Jordan).
 ARKANSAS - First-generation weevils continue to emerge, peak occurred in most areas of State. (Ark. Ins. Rpt.).
 MISSOURI - Infestations ranged 2-4 percent punctured squares in 21 of 620 fields scouted. All infested fields were in Dunklin County. (Kyd, Thomas).
 TEXAS - Activity increased over previous week in areas where fruiting is still taking place. Heavy damage noted in untreated fields. (Gaines).
 TENNESSEE - Survey concentrated on known infested fields in southern counties, due to weather. Punctured squares averaged 5 percent in these fields, compared with 22 percent for 1957. (Locke).
 LOUISIANA - Remained light generally in greater portion of cotton acreage planted late. Increased in the older cotton. Light first-brood infestations appearing in late-planted cotton. (Smith et al).
 MISSISSIPPI - General field infestations ranged 0-7 percent. Some localized areas in field corners and edges had 30 percent infestations. (Smith et al.).
 NORTH CAROLINA - Large numbers in few fields. Slow buildup in some lower Piedmont counties. (Cott. News Lett.).
 SOUTH CAROLINA - Increasing rapidly. First generation ovipositing freely. Square infestations as high as 75 percent in Florence area. Less than one percent infestation in 82 fields with proper control in Darlington County, with up to 18 percent in scattered locations. (Fye et al.). Puncture damage serious in some areas from emerging first generation. Infestations as high as 55-70 percent in untreated fields in some counties. Weevils present in all counties, greatest in Coastal Plain area. (Cott. Lett.).

BOLLWORMS (*Heliothis* spp et al.) - ARIZONA - Increasing in Pima County. An increase in eggs in many fields. Treatment applied. (Bottger, Kauffman, Sheets).
 NEW MEXICO - Medium, spotty infestations in Eddy County. Generally light with few medium infestations in Dona Ana and Luna Counties. Eggs and larvae light in Otero and Socorro Counties. (N. M. Coop. Rpt.).
 GEORGIA - Eggs averaged 15 per 100 terminals in 34 fields in middle and southern areas, larvae averaged 8 per 100 terminals. (Johnson). Worst bollworm infestation on record in Georgia continues to cause severe damage. (Jordan).

ALABAMA - Infestations in Winston, Colbert, Lauderdale and Madison Counties ranged 2-15 percent. (Ruffin, July 21). Infestations in north and north central areas lighter than last week. Damage ranged 0-40 per 100 terminals. (Grimes). ARKANSAS - Moths continue to emerge in numbers. Egg and larval counts increasing rapidly in many fields. Eggs and larvae found in both treated and untreated fields. (Ark. Ins. Rpt.). OKLAHOMA - Generally light in Caddo and Tillman Counties, less than 10 percent in fields checked. (Stoner). MISSOURI - Egg counts increased slightly but larval counts remained steady and low. (Kyd, Thomas). TEXAS - Main problem in cotton at present, especially in east, central, north central and northeast areas. (Gaines). TENNESSEE - General, heavier in fields controlled for boll weevil but did not have proper bollworm control added. Predator control evidently good in most fields. Feeding in many fields, but no larvae found. Infestations light. (Locke). LOUISIANA - Infestation averaged 5 percent in 108 of 109 fields examined in Madison Parish. Eggs averaged 6.49 and larvae 1.70 per 100 terminals examined in 53 fields. Eggs were found in 52 of the fields and larvae in 45. (Smith et al.). MISSISSIPPI - Few larvae and eggs on cotton in delta counties. Moth catches remained low. Very little activity for this time of year. (Merkel et al.). NORTH CAROLINA - Caused extensive damage to squares and young bolls in certain fields in lower southeast part of State. Five to ten injured squares per 100 examined in Scotland County. Not serious threat in central and northern counties at present. (Cott. News Lett.). SOUTH CAROLINA - Remains number one cotton pest in most of State. Damage is statewide, with 35-50 percent of squares and young bolls damaged in fields where control can not be applied at 3-day intervals. (Cott. Lett.). Caused great deal of damage in Florence area, but appears on decline, probably due to pupation. Light trap catches declined slightly. (Fye et al.).

APHIDS - GEORGIA - Light on cotton in 9 counties. (Johnson). Building up to damaging numbers in some fields. (Jordan). ALABAMA - *Aphis gossypii* extremely light in northern area. (Grimes). ARKANSAS - Populations static. Low in many fields. (Ark. Ins. Rpt.). TEXAS - Caused light damage. (Gaines). TENNESSEE - Slight increase, damage very light. Heaviest in treated fields. (Locke). LOUISIANA - Averaged 1.33 per square inch in 32 of 35 fields examined. (Smith et al.). MISSISSIPPI - General over delta counties, control required in many fields. (Merkel et al.). SOUTH CAROLINA - Numerous but scattered. Could become major problem with proper climatic conditions. (Fye et al.). Buildup continued in fields where no controls were applied. (Cott. Lett.).

COTTON LEAFWORM (*Alabama argillacea*) - LOUISIANA - Light on cotton in East Baton Rouge Parish. (Spink).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - ALABAMA - A limited number of larvae boring in cotton stalks in Madison County. First time this situation observed in Alabama this year. (Grimes).

FLEAHOPPERS - OKLAHOMA - *Psallus seriatus* generally light in southwest. (Stoner). MISSOURI - Increased, along with *Lygus* spp., with 1-20 adults and nymphs per 100 terminals in 566 of 620 fields scouted. (Kyd, Thomas). TEXAS - Populations remained high in north central and northeast areas. (Gaines). LOUISIANA - Few observed in fields examined. (Smith et al.). MISSISSIPPI - Light generally over delta counties. (Merkel et al.).

GARDEN WEBWORMS - ARKANSAS - Damaging cotton in several areas. Young cotton susceptible to damage but very few fields of old cotton have many larvae. (Ark. Ins. Rpt.). MISSOURI - Light to heavy spots developed in fields scattered over much of cotton growing area. Controls applied in several areas. (Kyd, Thomas).

LOOPERS - ARIZONA - Heavy in Maricopa and Pinal Counties, populations increasing in Pima County. At least 50 percent of larvae in some fields near Eloy affected with a virus. (Bottger, Kauffman, Sheets).
 NEW MEXICO - *Trichoplusia ni* general but light in Eddy and Socorro Counties. Medium spotty infestations in Dona Ana County. (N. M. Coop. Rpt.).
 GEORGIA - Continue light. (Johnson). TEXAS - Caused light damage. (Gaines).

LYGUS BUGS (*Lygus* spp.) - ARIZONA - Populations increased in the Salt River Valley. Many fields averaged 15 and some as high as 25 per 100 sweeps. (Bottger, Kauffman, Sheets). NEW MEXICO - *L. elisus* and *L. hesperus* light to heavy in Sierra, Socorro, Dona Ana and Luna Counties. Light in most fields in Eddy County. (N. M. Coop. Rpt.). TEXAS - Caused light damage. (Gaines).
 TENNESSEE - No increase in most fields, damage light. Control very effective. (Locke). LOUISIANA - Nymphs in many fields examined. Adults in some untreated fields. (Smith et al.). MISSISSIPPI - *L. lineolaris* light to heavy in delta counties. Control difficult where heavy. (Merk et al.).

SNOWY TREE CRICKET (*Oecanthus niveus*) - OKLAHOMA - Populations in southwestern area sharply decreased over past 2 weeks. Cotton lodged due to oviposition now about 3 percent in fields where highest populations were found. (Stoner).

SPIDER MITES - ALABAMA - Continue to cause trouble in localized areas despite rain. Could cause serious damage to cotton in Randolph County if not controlled. (Grimes). GEORGIA - Light to moderate on cotton in 11 counties, heavy in Cook, Tift, Grady and Colquitt Counties. (Johnson). ARKANSAS - Populations on increase. Few fields with general infestation but many with spots where mites extremely heavy. (Ark. Ins. Rpt.). MISSOURI - Light to heavy in 247 of 620 fields scouted. Increase in number of infested fields as well as spread over other infested fields. (Kyd, Thomas). TEXAS - Caused light damage. (Gaines). TENNESSEE - Becoming serious in many western fields. Defoliation in some heavier spots. Becoming heavy in fields not treated this season. Infestations are unusual this year as buildup usually occurs during hot and dry weather. (Locke). LOUISIANA - Averaged .89 per square inch in one field examined, Madison Parish. Infestations developing mainly where chlorinated materials were used for control. (Smith et al.). MISSISSIPPI - General over delta counties with controls required in many fields. (Merk et al.). NORTH CAROLINA - In a few localized spots in a few fields, Greene, Wayne, Sampson and Harnett Counties. (Cott. News Lett.).

STINK BUGS - NEW MEXICO - *Chlorochroa sayi* and *C. ligata* heavy and spotty in Sierra County, medium to heavy and spotty in Dona Ana, Eddy and Chaves Counties. General, medium to heavy in Luna County and light to moderate damage in Otero and Socorro Counties. (N. M. Coop. Rpt.).

THRIPS - TEXAS - Light in north and south plains areas, and on late cotton in north central and northeast areas. (Gaines).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SPRUCE BUDWORM (*Choristoneura fumiferana*) - MINNESOTA - Heavy defoliation in balsam stands in an area extending from the Canadian border south to a line through Lake Vermillion, west to a line from International Falls to Pelican Lake and east to Lake Saganaga. Another pocket of heavy defoliation in Cascade area along Lake Superior from Tofte to Good Harbor and to a line west of the Sawhill trail. An area of light defoliation extends around the heavy one. Some areas defoliated repeatedly for several years may expect tree mortality this year. (Minn. Ins. Rpt.).

SARATOGA SPITTLEBUG (*Aphrophora saratogensis*) - WISCONSIN - First adult emergence in northwestern area, July 17 and well under way in northeastern sections where heavy infestations exist in Oconto, Marinette, Oneida and Vilas Counties. Control planned for Oconto County. (Wis. Coop. Sur.).

APHIDS - IDAHO - Troublesome on ornamental and shade trees in the Twin Falls area. (T. F. F. S.). MASSACHUSETTS - *Pineus strobi* causing much concern. (Wheeler). MINNESOTA - *P. strobi* on Scotch pine in Milaca area. (Minn. Ins. Rpt.). MAINE - *Myzus cerasi* very abundant on wild cherry at Presque Isle. (Shands, July 19).

FALL WEBWORM (*Hyphantria cunea*) - DELAWARE - Very common on trees and shrubs in Sussex County. (MacCreary, Conrad).

PALE TUSSOCK MOTH (*Halisidota tessellaris*) - DELAWARE - Larvae common on sycamores in northern Sussex County. (MacCreary, Conrad).

LACEBUGS - WEST VIRGINIA - *Corythucha ciliata* moderate on sycamore, statewide. (W. Va. Ins. Sur.). MINNESOTA - Lacebugs, probably *Corythucha arcuata*, discoloring oak foliage in Minneapolis-St. Cloud areas. (Minn. Ins. Rpt.).

LOCUST LEAF ROLLER (*Nephoteryx subcaesiella*) - VIRGINIA - Heavy on honeylocust in Blacksburg. Det. W. G. Evans. (Michael).

WALKINGSTICK (*Diaperomera femorata*) - MARYLAND - Nymphs in small numbers on oaks on Polish Mountain, Allegany County. (U. Md., Ent. Dept.).

SOLITARY OAK LEAF MINER (*Cameraria hamadryadella*) - LOUISIANA - Heavily infesting an oak wooded area in Caddo Parish. (Spink).

LOCUST LEAF MINER (*Chalepus dorsalis*) - WEST VIRGINIA - Moderate to heavy on black locust in northern half of State. (W. Va. Ins. Sur.).

ELM BARK BEETLES - WISCONSIN - First cases of Dutch elm disease found in Dane and Green Counties. *Scolytus multistriatus* reported for first time in Calumet County and *Hylurgopinus rufipes* reported for first time in Calumet and Dodge Counties. (Wis. Coop. Sur.).

ELM LEAF BEETLE (*Galerucella xanthomelaena*) - MASSACHUSETTS - Damage very noticeable in some eastern and central towns. (Wheeler). ALABAMA - Heavy infestations from several areas of State during mid-July. (Grimes). OREGON - Second generation appearing in Corvallis area. Infestation heavier than normal. (Every). IDAHO - Adults of second generation emerging in great numbers in Canyon County. (Waters).

MITES - DELAWARE - *Oligonychus bicolor* conspicuous on willow oaks in New Castle County. (MacCreary, Conrad). OKLAHOMA - Eriophyid mites heavily infesting leaves of scattered elms in Stillwater area. (Apt). NEW JERSEY - *Oligonychus ilicis* and *Tetranychus telarius* causing damage in nurseries. (Ins. Dis. News.). NORTH DAKOTA - Spider mites heavy in spruce, juniper and pine in northwestern area where drought conditions have prevailed most of season. (N. D. Ins. Rpt.).

BAGWORM (*Thyridopteryx ephemeraeformis*) - DELAWARE - Feeding heavily on sycamores in New Castle and Sussex Counties. (MacCreary, Conrad). MARYLAND - Heavy infestations on ornamental evergreens in Anne Arundel, Prince Georges, Charles and Allegany Counties. (U. Md., Ent. Dept.). WEST VIRGINIA - More numerous on various hosts than in 1957 in Harrison County. (W. Va. Ins. Sur.).

SCALE INSECTS - PENNSYLVANIA - *Unaspis euonymi* in very heavy infestations on bittersweet at Centre and Westmoreland Counties. (Udine). WYOMING - *Lecanium nigrofasciatum* abundant on elms and ash at Worland. (Davison).

GALL MIDGES - UTAH - Itonidid larvae destroying pits of 40-85 percent of chokecherries in northern Utah. (Knowlton).

EUROPEAN EARWIG (*Forficula auricularia*) - MASSACHUSETTS - More numerous than ever before. Abundant in Worcester area and at Amherst. Serious damage in gardens. Has been the number one garden and household pest for several weeks. (Wheeler). IDAHO - Heavy in many areas of State. (Gittins).

GREEN JUNE BEETLE (*Cotinis nitida*) - INDIANA - Damaging flowers 10 miles north of Lafayette. They seldom appear in destructive numbers this far north. (Lehker).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - NORTH DAKOTA - High populations continue troublesome in many areas. (N. D. Ins. Rpt.). WISCONSIN - Heavy populations of *Aedes sticticus* and *A. trivittatus* in Rusk and Bayfield Counties. (Wis. Coop. Sur.).

A TABANID (*Tabanus sonomensis*) - UTAH - Very troublesome in Randolph-Woodruff fields and over Rich County. (Knowlton).

FLIES - WISCONSIN - In a total of 173 barns checked in 15 counties over the State during the week ending July 19, populations and activity of horn, stable, horse and deer flies increased to large extent. Also higher percentage of barns had fly problems. Stamping of cattle caused by heel flies increased. (Wis. Coop. Sur.).

SAND FLIES - IDAHO - Common in areas along upper reaches of North Fork of the Clearwater drainage. Considerable annoyance to sportsmen in these areas. (Gittins).

A MIDGE (*Tendipes plumosus*) - WISCONSIN - First major emergence began July 18, with heavy emergence July 19. Lake Winnebago area. Extremely annoying to residents in the area. (Wis. Coop. Sur.).

A WASP (*Vespula arenaria*) - RHODE ISLAND - Multiple stings involved in death of 66-year old man, July 16. Struck nest while pruning hedge, East Greenwich. (Mathewson).

FLEAS - NEW JERSEY - Number of complaints received. Several collections identified as *Ctenocephalides felis*. (Ins. Dis. News1.). NORTH CAROLINA - *C. felis* received from Sampson County and reported from Lenoir, Craven and Wake Counties. (Ashton).

BLOODSUCKING CONENOSE (*Triatoma sanguisuga*) - TEXAS - Biting and causing serious pain to residents in McLennan and Colorado Counties. (Hawkins).

AMERICAN DOG TICK (*Dermacentor variabilis*) - MASSACHUSETTS - More numerous and widespread than ever before. (Wheeler).

CHIGGERS - WISCONSIN - Abundant in bluffs of southwestern Grant County. (Wis. Coop. Sur.).

LESSER MEALWORM (Alphitobius diaperinus) - PENNSYLVANIA - Very abundant in chicken manure in Schuylkill County. Third report for this year. (Menusan).

STORED-PRODUCT INSECTS

CADELLE (Tenebroides mauritanicus) - PENNSYLVANIA - Numerous in stored rye at Clearfield. (Gesell).

FLAT GRAIN BEETLE (Laemophloeus pusillus) - PENNSYLVANIA - Numerous in stored rye at Clearfield. (Gesell).

BENEFICIAL INSECTS

PREDATORS - NEBRASKA - Lady beetles, lacewings, Orius spp. and Geocoris spp. in abundance in most areas. (Andersen, Roselle). MINNESOTA - Lady beetles increased in all districts and have reduced aphid numbers. (Minn. Ins. Rpt.). RHODE ISLAND - Syrphid adults numerous in alfalfa fields, pea aphid populations negligible, in Kingston area. (Hansen). OKLAHOMA - Collops spp. common in Creek County alfalfa, 6-10 adults per 10 sweeps. (Coppock). MAINE - Many lady beetle eggs present in oats, Presque Isle. Syrphid fly eggs and larvae also abundant. (Shands, July 11).

MISCELLANEOUS INSECTS

JAPANESE BEETLE (Popillia japonica) - INDIANA - Some increase in heavily infested area of Newton County, but much less than in 1957. Two traps with one beetle caught July 3-11, had 10 beetles July 18-25. Adults still scarce. (Gould). RHODE ISLAND - Adults locally abundant in Narragansett area. (Hansen). MASSACHUSETTS - About 10-14 days late, lighter in areas hit by drought in 1957. (Wheeler). NEW JERSEY - Very abundant in some areas. (Ins. Dis. News1.). DELAWARE - Prevalent in a few soybean fields, New Castle County. No increase generally throughout State. (MacCreary, Conrad). WEST VIRGINIA - Light to heavy on various hosts. Fewer beetles generally in eastern panhandle. Heavy in Webster, Wood and Roane Counties. New infestations in Mason, Jackson, Monroe and Fayette Counties. (W. Va. Ins. Sur.). NEW YORK - Extremely light on ornamentals in Suffolk County. (N. Y. Wkly. Rpt.).

ARGENTINE ANT (Iridomyrmex humilis) - FLORIDA - Adults abundant at Salt Springs, Marion County. Not observed here previously. Det. L. A. Hetrick. (Fla. Coop. Sur.).

STRAWBERRY ROOT WEEVIL (Brachyrhinus ovatus) - INDIANA - Three reports of homes being invaded in northern part of State. (Lehker, July 15).

CORRECTION

CEIR 8(30):658. Under SCALE INSECTS, PENNSYLVANIA, change to read: Pulvinaria innumerabilis severe on maple etc.

ADDITIONAL NOTES

WEST VIRGINIA - EUROPEAN CORN BORER light to moderate, 15 per 100 stalks, in sweet corn, Ohio, Hancock and Brooke Counties. (W. Va. Ins. Sur.).

NEW YORK - CORN EARWORM mostly pupated in Hudson Valley sweet corn, little sign of emergence. No adults in Nassau County light trap. Harvested corn in Hudson Valley shows low incidence of damage, most of which is EUROPEAN CORN BORER. ARMYWORM moths abundant in light trap but scarce on corn, in Hudson Valley, and very heavy in Nassau County light trap. CORN FLEA BEETLE abundant in unsprayed Hudson Valley corn. CORN LEAF APHID increased, may require control. (N. Y. Wkly. Rpt.).

MISSISSIPPI - AMBROSIA BEETLES (*Platypus compositus*) caused considerable damage in Lamar County. Required treatment of timber at mills and yards. Several mature NANTUCKET PINE MOTH larvae and adults infested branches, no earlier stages found. Various species of CATOCALA adults reported in light traps and at lights. (Hutchins).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Protoparce sexta quinq.	Heliothis zea vires.
ALABAMA						
Crossville 7/9, 14, 16	138		3		1 127	220
ARKANSAS						
Fayetteville 7/17-23	49	64		26		57
Hope 7/17-23	5					32
Kelso 7/17-23		2				4
Morrilton 7/17-23	23	13				49
Stuttgart 7/10-23	28	4				23
FLORIDA						
Gainesville 7/16-22					2	4
Quincy 7/8-21					19	28 31
ILLINOIS						
Urbana 7/18-24	642	8		230		
INDIANA (Counties)						
Orange 7/16	52			1	3	
Tippecanoe 7/15-22	8007	76		3464		
LOUISIANA						
Baton Rouge 7/18-24	9	7	102	1		44
Curtis 7/21,23	43	4	13			119
Franklin 7/21,23		2	30			
MAINE						
Orono 7/20-26	5					
Presque Isle 7/13-26	4					
MARYLAND						
Delmar 7/15-21	43	9		8	33 spp.	6
MISSISSIPPI						
Grenada 7/14-19	4	1	4			4
Senatobia 7/19-24		2				4
*State College 7/19-25	184	10	226		1	34 2
*Stoneville 7/18-24	55	23	84	1	6	92

* Two Traps - State College; 4 traps - Stoneville.

LIGHT TRAP COLLECTIONS - Continued

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Protoparce sexta	quina	Heliothis zea	vires.
NEBRASKA								
Alliance 7/8-13	541			61		2	2	1
Kearney 7/8-13						3		
Lincoln 7/12-18	3155	234		85			26	
North Platte 7/11-17	4674	50		1168	5	33	42	2
Scotts Bluff 7/15-21	570			143		2		
NORTH CAROLINA								
Clayton 7/24	141	10	46		88spp.		8	
Faison 7/24	25	2	99		15	10		1
SOUTH CAROLINA								
Charleston 7/21-27	5	5	115	1	4		9	2
Clemson 7/19-25	313	8	173		41	30	7	1
Florence 7/20-26	244	19	522	11	73	14	301	219
TENNESSEE (Counties)								
Blount 7/15-21	240	6	45	12	9	15	9	
Cumberland 7/15-21	761	4	44	20	6	12	10	
Greene 7/15-21	932	18	194	34	4	4	8	
Maury 7/15-21	768	4	76	20			12	
Robertson 7/15-21	60	16	20		8	12		
TEXAS								
Brownsville 7/8-11		16					496	48
ARMYWORM (<i>Pseudaletia unipuncta</i>) - WISCONSIN - 7/15-21: *Arlington - 58; Beaver Dam - 129; Fall River - 88; Gays Mills - 33; Janesville - 350; La Crosse - 535; Middleton - 21; Oakfield - 25; Platteville - 338; Ripon - 171; River Falls - 175; Rosendale - 109; Stevens Point - 5; Waterloo - 46.								

*Two traps - Arlington.

VOL. 8 No. 32

AUGUST 8, 1958

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Plant Pest Survey Section
Plant Pest Control Division
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United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GRASSHOPPERS heavy and damaging to some crops in area of Wyoming. Caused severe damage to wheat and alfalfa in Idaho. Controls still required in localized areas of central and north central Kansas. (p. 687).

CORN EARWORM abundant in eastern Nebraska, moderate to heavy in Pahrump Valley, Nevada, and heavy throughout New Mexico. (p. 688).

FALL ARMYWORM damaging to some grain crops in several states. (p. 688). CORN ROOTWORMS damaging in several areas. (p. 689). HESSIAN FLY survey in Nebraska and WHEAT STEM SAWFLY survey in North Dakota. (p. 690).

LYGUS BUGS numerous in alfalfa in several western states. (p. 692). VELVETBEAN CATERPILLAR moths taken on Eastern Shore of Virginia. (p. 693). ORCHARD MITE populations increasing in several areas. CODLING MOTH heavier than usual in some areas of California and Oregon. (p. 694).

A WEEVIL, new to West Virginia. ROSE STEM GIRDLER in Utah apparent first record west of Mississippi River. (p. 698).

BOLL WEEVIL high in untreated cotton fields in South Carolina, Georgia and Alabama. Caused heavy damage in Oklahoma. (p. 698). SPIDER MITES troublesome and causing damage to cotton in several areas of various cotton-growing states. (p. 699).

MOSQUITOES abundant and causing considerable annoyance in several states. (p. 701).

A new species of SCALE reported from Oklahoma for first time. (p. 703).

ADDITIONAL NOTES. (p. 707). CORRECTIONS. (p. 708).

WEATHER BUREAU 30-DAY OUTLOOK

AUGUST 1958

The Weather Bureau's 30-day outlook for August calls for temperatures to average below seasonal normals over the northeast quarter of the nation. Above normal temperatures are predicted in the South Atlantic States and over the western half of the country except for near normal over the Central and Southern Plateau. In the remainder of the country temperatures not far from normal are anticipated. Precipitation is expected to equal or exceed normal over the eastern half of the nation and also west of the Continental Divide. Subnormal amounts are indicated for the Southern Plains, and near normal for the Northern Plains.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 a half year.

WEATHER OF THE WEEK ENDING AUGUST 4

More heavy rains and flooding featured the week's weather from the central Great Plains eastward through the Ohio Valley. Rains on 3 or 4 days totaled from 2 to over 6 inches, and cloudy skies kept temperatures at below-normal levels. This has been the weather pattern in this area through most of July. Indiana reports the wettest July in the central and southern portions of the State since the beginning of statewide records in 1887, and that totals for June and July average 19.50 inches in the central portion of the State and 16.10 inches in the south, which is 4 to 6 inches more than for any other June-July period on record. Illinois reports the wettest June-July period in the central portion of the State in at least 50 years, as well as the coolest in the central and northern portions in at least that same period of time. Recurring floods along the White and Wabash Rivers in Indiana, as a result of the recent additional heavy rains precludes any chance for crops this year, and in some sections for the second consecutive year. The week's rainfall generally totaled from 1 to over 2 inches east of the lower Mississippi River, and flooding rains caused some crop damage in the Delta area of Mississippi. Soil moisture continues adequate to excessive in this area except for some dry spots in the Carolinas and south central Virginia.

In the North Central Interior, light rainfall was not sufficient to satisfy growing crop needs in many sections. Row crops need rain in about half the counties of Michigan. In Wisconsin, small streams are falling in the north and drying up in the south. Soil moisture is generally short in northern South Dakota, in many areas of southern Minnesota, and in northeastern Montana. In the Far Southwest showers produced up to an inch of moisture in north and northwest Texas and 1 to 4 inches in southwestern New Mexico and southern Arizona. Precipitation was generally very light or did not occur at all west of the Continental Divide except in widely scattered local thundershowers. Temperatures rose into the 90's daily in the South, in northern areas west of the Divide on July 28 and August 2, and in the northern Great Plains the last 3 days of the period. Although storms were relatively few during the week, several hailstorms were reported in the Western States. The worst one occurred in Montana along the western slopes of the Continental Divide on the 27th and caused crop and property damage exceeding \$1 million. (Summary supplied by the U. S. Weather Bureau.)

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - DELAWARE - Dissosteira carolina feeding lightly on soybeans. (MacCreary, Conrad). LOUISIANA - Conocephalus fasciatus nymphs and adults averaged 300-350 per 100 sweeps in rice. (Spink). MINNESOTA - Generally low in north central and northwest districts, non-economic to light, high in occasional fields. Melanoplus bivittatus mostly adults in both districts with some fourth-instar nymphs. Continued low in west central district. Many Camnula pellucida females gravid in north central district, some egg laying. M. femur-rubrum still hatching in some areas. (Minn. Ins. Rpt.). WISCONSIN - M. femur-rubrum variable, generally low in southern counties. Averaged 75 per square yard in a Washington County field, 12 in a Dodge County field and 30 per square yard in a Dane County field. In Jackson, Clark, Buffalo and Wood Counties nymphs ranged 9-27 per square yard. Weather appears to have favored survival of economic populations. (Wis. Coop. Sur.). SOUTH DAKOTA - Serious in some localized areas near Bristol in Day County, with up to 30 per square yard noted in some alfalfa acreage reserves. M. bivittatus dominant in this area. (Walstrom). KANSAS - Initial summer surveys showed crop feeding species light to severe in central and north central areas, with 3-18 per square yard in fields and 5-30 along field margins, fence rows and along weed patches. Dominant species were M. differentialis, M. bivittatus and M. bilituratus. About 90 percent of M. differentialis were adults and all three species were mating. In some fields fungus disease had accounted for 10-45 percent mortality. Controls still needed in localized areas. Federal-rancher control program in Morton County completed on total of 88,000 acres of rangeland. Excellent control obtained, with 20-35 per square yard reduced generally to less than 2 per square yard. (Matthew). MONTANA - In Stillwater County 33,000 acres in 2 areas were sprayed. (PPC, West. Reg., June Rpt.).

WYOMING - Very heavy in about 15,000 acres of crop and reversion lands in Mill Creek area northeast of Lander, Fremont County. Much damage to hay and other crops. M. packardii, M. bivittatus, C. pellucida and adults and nymphs of M. femur-rubrum most important species. (Davison). By June 17 a small percentage of many species in several areas were adult. Adults of M. femur-rubrum were observed about 3 weeks earlier than in 1957. Over 36,000 acres of Federal Lands in Fremont County were found to have economic populations. Heavy infestations were found bordering seeded croplands in the Riverton area. Approximately 400 miles of roadways and canals were sprayed in Goshen County. (PPC, West. Reg., June Rpt.). IDAHO - Light infestation, predominantly M. bilituratus, on small rangeland area in Nez Perce area. (Gittins, Foote). Averaged 40-50 per square yard in field margins and 25-30 in range areas adjacent to crops in Midvale area, Washington County. Severe damage to wheat and alfalfa field margins. Up to 100 per square yard in bitterbrush plantings along south fork of Boise River. On approximately 20,000 acres adjacent to this area, M. bivittatus, M. packardii and M. bilituratus ranged 30-50 per square yard. Baiting is planned. Spotted throughout Camas County. Heaviest in grass plantings, running 35-40 per square yard. Populations mixed, with C. pellucida, M. bilituratus, M. bivittatus, M. packardii and Oedaleonotus enigma included. (Evans, Hamilton). UTAH - Largely winged adults in many localities. (Knowlton). NEVADA - Trimerotropis spp. and some Melanoplus spp. in considerable numbers in Hiko area, Lincoln County. (Bechtel, Parker, Zoller, July 25). Nymphs and adults of Trimerotropis spp. damaged grain in Fish Lake Valley, Esmeralda County, although peak has passed. (Bechtel, Hackett, July 25). OKLAHOMA - Generally light along roadsides and on rangeland in eastern half of State, but considerably more numerous than in 1957. Averaged 4-8 per square yard on rangeland and 4-12 in roadsides and margins. Mermeria spp. most common on rangeland with Melanoplus differentialis and M. bivittatus most abundant crop species. (Coppock).

MORMON CRICKET (*Anabrus simplex*) - In WYOMING, another heavy band was reported in the Worland area. The infestation near Casper increased to an estimated 35,000 acres. Baiting was completed on 37,509 acres in NEVADA and 7,225 acres in MONTANA. (PPC, West. Reg., June Rpt.).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - NEW JERSEY - Second brood emerged July 27 in Burlington County. (Ins. Dis. Newsl.) DELAWARE - Egg laying lessened on field corn, Kent County. Larvae common in ears of field corn, southern Sussex County. (MacCreary, Conrad). MARYLAND - Generally low in Federick and Queen Annes Counties. (U. Md., Ent. Dept.). VIRGINIA - Severe on corn in some spots in Shenandoah County, medium in others. (Coiner). WISCONSIN - About 49 percent in fourth instar and 6 percent in pupal stage in Walworth, Rock, Green and Lafayette Counties, July 30. (Wis. Coop. Sur.). MINNESOTA - Apparently not a problem in field corn except possibly in southwest and south central districts. High in occasional fields in other districts, but generally light. Pupating in southwest and south central districts. (Minn. Ins. Rpt.). NORTH DAKOTA - Survey in Cass and Richland Counties showed 40 percent of plants infested with first and second-instar larvae. Few egg masses still present in northern Cass County. (N. D. Ins. Rpt.). SOUTH DAKOTA - Averaged 108 larvae per 100 plants in east central area, with 41 percent of plants infested. Seventy-eight percent of larvae in third instar. (Hantsbarger). KANSAS - Light numbers being taken in light trap at Manhattan, indicating beginning of next brood. (Matthew). ILLINOIS - First-generation survey indicates 0-20 percent pupation at present. (Ill. Ins. Rpt.). OHIO - Nearly 100 percent first-brood pupation in early planting of sweet corn at Marietta, July 24, but only 25 percent at a similar planting in Stark County July 23. No pupation in field corn in Putnam, Huron and Sandusky Counties, July 29-31. (Triplehorn). MISSOURI - Second-brood egg laying light in central area, generally less than 10 egg masses per 100 stalks, with 45 percent still in larval stage, 38 percent pupation and 17 percent emergence. (Munson, Peters). ARKANSAS - Second generation light in most corn fields. (Ark. Ins. Rpt.).

CORN EARWORM (*Heliothis zea*) - NEW JERSEY - Few eggs on corn silks in Burlington County. (Ins. Dis. Newsl.) DELAWARE - Small larvae heavy in ears of field corn, southwestern Sussex County, common in sweet corn ears elsewhere. (MacCreary, Conrad). VIRGINIA - Medium on stalks and ears of corn in Roanoke County. (Allen). Heavily damaged corn blades and whorls in Patrick County, July 7. Det. H. W. Capps. (Rowell, Olinger). WISCONSIN - In early market sweet corn in southeastern Juneau County. (Wis. Coop. Sur.). OHIO - Natural infestation of ears of early planted sweet corn on check plots at Marietta was 33.8 percent July 24. (Triplehorn). NEBRASKA - Larvae very abundant in sweet corn in eastern part of State, with 10 per 10-corn ear sample not uncommon. (Andersen). KANSAS - Generally much lighter than in previous years, in all corn fields examined in Clay, Marshall, Riley and Dickinson Counties. (Matthew). TEXAS - Averaged 2-5 per head in grain sorghums, Burleson and Robertson Counties. (Randolph). WYOMING - Trace of damage in corn field near Pine Bluffs, Laramie County. No evidence in other corn fields checked in Laramie, Goshen and Platte Counties. (Davison). IDAHO - No infestations in commercial corn fields in Caldwell, Nampa, Melba and Boise area. (Gittins, Foote). NEVADA - Moderate to heavy on corn in Pahrump Valley, Nye County. Averaged 2 per ear. (Bechtel, Zoller, July 25). OKLAHOMA - Light, general damage to ears of early field corn in southern and southeastern areas. Medium to heavy damage to late-planted corn in same areas. (Coppock). NEW MEXICO - Heavy on sweet corn throughout State. Caused extensive damage in untreated plots. (N. M. Coop. Rpt.).

FALL ARMYWORM (*Laphygma frugiperda*) - NEW JERSEY - Large numbers in Moorestown area July 24. (Ins. Dis. Newsl.). DELAWARE - Common in late field corn and stunted portions of larger field corn throughout State. (MacCreary, Conrad). MARYLAND - Affecting late sweet corn in Montgomery and Prince Georges Counties,

and silage corn in some areas. This is earliest heavy infestation in several years. (U. Md., Ent. Dept.). VIRGINIA - Heavy and damaged late corn in Goochland County (Willey), damaged silage corn in Bedford County (Morris, Gregory) and corn in Spotsylvania and Middlesex Counties (Morris, Kash, DeBusk). Damaged rye and sorghum on Eastern Shore. (Hofmaster). GEORGIA - Light on coastal Bermuda grass, Burke and Screven Counties. (Johnson). ARKANSAS - Second-generation larvae on corn. (Ark. Ins. Rpt.). ILLINOIS - Small numbers in many areas. In East St. Louis area, some late corn fields had 25-50 percent of plants infested with 1-2 small larvae in each whorl. (Ill. Ins. Rpt.). MISSOURI - In late corn over southern half of State, with 1-4 larvae per stalk in 20-53 percent of stalks in extreme southeast area. (Kyd, Thomas). KANSAS - Infestations found across the State. Infestations ranged 4-48 percent in late-planted corn fields examined. Larvae in second to last instar. Considerable damage in a few fields. (Matthew). TEXAS - Averaged 2-3 per stalk on young grain sorghum in Robertson County. (Randolph).

SORGHUM WEBWORM (Celama sorghiella) - TEXAS - Heavy on late maize in Milam County. (Moore). Averaged 25 per head on grain sorghums in Burleson and Robertson Counties. (Randolph).

CORN FLEA BEETLE (Chaetocnema pulicaria) - MICHIGAN - Populations sufficient to spread Stewart's disease in some plantings of corn about Benton Harbor, St. Joseph and South Haven. (Hutson). ILLINOIS - On sweet and field corn in southern half of State. Some fields of late sweet corn in East St. Louis area averaged 4-6 per plant. Stewart's disease evident. (Ill. Ins. Rpt.).

CORN ROOTWORMS (Diabrotica spp.) - WISCONSIN - Adults of D. longicornis in corn stalks in Walworth and Rock Counties. (Wis. Coop. Sur.). MISSOURI - D. longicornis adults continued light to heavy feeding on corn silks in scattered fields over southeast and central areas. Heaviest damage in creek and river bottom fields, with 1-18 per silk mass. Pollination retarded in very few fields. (Kyd, Thomas). SOUTH DAKOTA - Two severe infestations of Diabrotica spp. in Charles Mix County, with one 12-acre corn field lost. (Hantsbarger). NEBRASKA - Extensive feeding by D. longicornis, D. virgifera and D. undecimpunctata howardi in southeast and northeast sections, with as many as 14 on a single plant. (Andersen). KANSAS - Low numbers of D. virgifera in corn fields observed in Clay, Marshall and Riley Counties. Very slight evidence of silk feeding. Ranged 9-56 per 25 plants examined. (Matthew). WISCONSIN - Lodging of sweet corn due to D. longicornis damage observed in Dane County. Apparently responsible for heavy damage to Pierce County field corn in untreated acreage planted to corn several years in succession. (Wis. Coop. Sur.).

SAP BEETLES - DELAWARE - Carpophilus lugubris heavy in silks and ears of field corn throughout State. (MacCreary, Conrad). VIRGINIA - General and damaged field and sweet corn in Isle of Wight County. (Grizzard). Heavy on sweet corn in several places in Stafford County. (Beck). OHIO - C. lugubris very abundant in ears of sweet corn at Marietta. Incidence appeared to exceed that of corn earworm. (Triplehorn). WISCONSIN - Abundant where corn borers are feeding on corn. Also reported in other locations. (Wis. Coop. Sur.).

SOUTHWESTERN CORN BORER (Zea diatraea grandiosella) - ARKANSAS - Moths laying eggs on corn in northern most counties. Fifth-instar larvae in Woodruff County corn. (Ark. Ins. Rpt.).

SUGARCANE BORER (Diatraea saccharalis) - LOUISIANA - Increased in untreated cane fields, second and third generations overlapping. (Spink). TEXAS - Survey in 13 counties in upper coastal and south central areas showed larvae in grain sorghums and late corn. Exit holes in older fields of corn. (Hawkins).

CHINCH BUG (Blissus leucopterus) - TEXAS - Heavy on late corn in Waller and Harris Counties. (Hawkins).

CORN LEAF APHID (Rhopalosiphum maidis) - DELAWARE - Increased in most field corn throughout State. (MacCreary, Conrad). OHIO - Light to moderate in Putnam and Allen Counties, moderate to heavy in Sandusky and Huron Counties. Corn borer-resistant varieties continue to show striking resistance to this aphid. (Tripplehorn). WISCONSIN - Building up in tassels of field corn in southern tier of counties, but not more than 6 percent of tassels infested in fields observed. (Wis. Coop. Sur.). MINNESOTA - Mostly on tassels, some observed on emerging silks. High predator populations should effect control. (Minn. Ins. Rpt.). NEBRASKA - Heavy in field corn in northeast section. (Andersen). WYOMING - Appeared in corn tassels throughout Laramie, Goshen and Platte Counties. None observed on leaves. (Davison). WASHINGTON - Collected from barley with yellow dwarf virus near Pullman. Det. L. M. Russell. (Brannon).

A SYRPHID (Mesogramma polita) - MISSISSIPPI - Large numbers in corn in Oktibbeha and adjoining counties causing considerable alarm among farmers. (Hutchins).

ARMYWORM (Pseudaletia unipuncta) - MINNESOTA - Threat to grains appears to have passed. (Minns. Ins. Rpt.). WISCONSIN - Little threat to small grains as harvest is well underway many sections. Few small larvae feeding in emerging husks of corn in Columbia County July 26. (Wis. Coop. Sur.). MASSACHUSETTS - Serious infestations reported in Essex County. (Crop Pest Cont. Mess.). INDIANA - Flights subsiding in Tippecanoe County. (Deay).

HESSIAN FLY (Phytophaga destructor) - NEBRASKA - Partially completed survey of wheat in western and southwestern counties revealed heavy infestations of 8-32 percent in Red Willow, 6-16 in Chase, 8-30 in Keith, 2-20 in Deuel, 4-12 in Hayes and 8-38 in Perkins Counties. Parasites, either Merisus destructor or Eupelmus allnyi, abundant in most fields surveyed. (Andersen).

WHEAT STEM SAWFLY (Cephus cinctus) - NORTH DAKOTA - Fourth annual survey completed in northwestern counties, with larvae in 0-63 percent of stems. Generally less severe than in previous 3 years. Heaviest in northern McLean, southwestern Ward and southern Mountrail Counties. Also damaging in some fields in Divide, Burke, Renville and Bottineau Counties. (N. D. Ins. Rpt.).

BLISTER BEETLES (Epicauta spp.) - LOUISIANA - Averaged 100 per 100 sweeps in rice. (Spink). DELAWARE - Common in alfalfa in western Kent County. (MacCreary, Conrad). KANSAS - In all alfalfa fields surveyed in Marshall, Riley, Clay, Dickinson and Geary Counties, with 8-20 per 25 sweeps. (Matthew).

RICE STINK BUG (Oebalus pugnax) - LOUISIANA - Averaged 4 per 100 sweeps in clean rice, 173 in rice mixed with wild grass. Moving to rice in fields with grass and where rice is heading. (Spink).

A STINK BUG (Euschistus ictericus) - LOUISIANA - Ranged 5-27 per 100 sweeps in rice. (Spink).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - LOUISIANA - Ranged 10-20 per 100 sweeps in rice. (Spink).

CLOVER ROOT BORER (Hylastinus obscurus) - WASHINGTON - Averaged 5-6 larvae per root in 100 percent of plants in red clover seed field near Chehalis, Lewis County. (Johansen).

CLOVER ROOT CURCULIO (Sitona hispidula) - RHODE ISLAND - Adults active in alfalfa and red clover in vicinity of Kingston. (Hansen).

SWEETCLOVER WEEVIL (Sitona cylindricollis) - UTAH - Damage moderate to light generally. (Knowlton).

PEA LEAF WEEVIL (Sitona lineata) - OREGON - Disappeared from legume fields July 23-30. Apparently due to extremely hot weather, which was earlier than in 1957. (Dickason). WASHINGTON - Up to 18 per 25 sweeps in red clover seed fields near Chehalis. Considerable notching of foliage by adults in some fields. (Johansen).

ALFALFA WEEVIL (Hypera postica) - DELAWARE - Adults common on alfalfa in Kent and Sussex County fields. (MacCreary, Conrad).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - IDAHO - Larvae damaged some southwest red clover fields. (Waters).

WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata) - OREGON - High populations still present in legume fields. (Dickason). WASHINGTON - Adults averaged 5-35 per 25 sweeps in red clover for seed near Chehalis, Lewis County. (Johansen).

A COLASPIS (Colaspis sp.) - DELAWARE - Very common in red clover, eastern Sussex County. (MacCreary, Conrad).

A TORTRICID - UTAH - Damaged alfalfa seed crops in Cache County (Haws, Knowlton) and some damage to same crop in eastern Millard County (Knowlton).

CABBAGE LOOPER (Trichoplusia ni) - DELAWARE - Common on alfalfa in western New Castle County. (MacCreary, Conrad)

WEBWORMS (Loxostege spp.) - KANSAS - None found in alfalfa fields examined in Clay, Marshall, Riley and Dickinson Counties. (Matthew). OKLAHOMA - Numbers light in scattered alfalfa fields throughout State. (Coppock). MINNESOTA - L. sticticalis reported on soybeans. (Minn. Ins. Rpt.). ARKANSAS - L. similalis continued to damage young soybeans. (Ark. Ins. Rpt.).

CLOVER APHID (Anuraphis bakeri) - IDAHO - In all red clover fields inspected. No damaging populations observed. (Waters).

GREENBUG (Toxoptera graminum) - PENNSYLVANIA - Numerous specimens taken in light trap in Centre County July 4-5. (Pepper).

PEA APHID (Macrosiphum pisi) - DELAWARE - Common in red clover in eastern Sussex and on alfalfa in western Kent Counties. (MacCreary, Conrad). MINNESOTA - Populations on alfalfa down in all districts. Predators numerous, appear to be reducing numbers. (Minn. Ins. Rpt.). WYOMING - Small numbers in alfalfa, Laramie, Goshen and Platte Counties. Heavy in second-cutting alfalfa, Park County. (Davison). UTAH - Caused moderate damage to some alfalfa fields in Morgan, Summit, Utah and Wasatch Counties. (Knowlton). IDAHO - Generally low in southwestern alfalfa fields, primarily due to large number of predators. (Waters).

SWEETCLOVER APHID (Myzocallidium riehmii) - UTAH - Throughout most of State. (Knowlton).

SPOTTED ALFALFA APHID (Therioaphis maculata) - WEST VIRGINIA - Mid-summer survey in Greenbrier and Monroe Counties negative. (W. Va. Ins. Sur.). OKLAHOMA - Numbers remained fairly high in southwestern and south central fields. Increased tenfold in Payne County. (Bieberdorf, Pennington). Very light in extreme southeastern alfalfa fields. (Coppock). TEXAS - Heavy in some fields in Burleson and Brazos Counties. (Randolph). UTAH - Not economic

in State to date. (Knowlton). Recently appeared in Delta area of western Millard County. (Knowlton, Ogden). NEVADA - Increased in several southern localities. Heavy, economic in only one field examined. General decrease of predators and parasites in some areas and increased temperatures favored the increase. (Bechtel, July 25). Very light, scattered in Panaca in Lincoln County, Virgin Valley in Clark County and Pahrump Valley in Nye County. Economic in some fields in Las Vegas area, Clark County. (Bechtel, Zoller, July 25).

MEADOW SPITTLEBUG (*Philaenus leucophthalmus*) - RHODE ISLAND - Adults very light in alfalfa and red clover in vicinity of Kingston. (Hansen).

FALSE CHINCH BUGS (*Nysius* spp.) - IDAHO - Nymphs of *N. ericae* heavy in Weiser and Ada Counties. (Hackler, Hilfiker). NEVADA - *Nysius* sp. nymphs heavy in homes and gardens in Reno area, Washoe County. Migrating from fields and vacant lots. (Nev. Coop. Rpt.). UTAH - *Nysius* sp. extremely numerous on range and about some homes in Millard, Utah, Summit and Morgan County area. (Knowlton).

LYGUS BUGS (*Lygus* spp.) - RHODE ISLAND - *L. lineolaris* numerous in red clover and alfalfa. (Hansen). WISCONSIN - *L. lineolaris* numbers high in some alfalfa fields. (Wis. Coop. Sur.). SOUTH DAKOTA - Nymphs averaged 95 per 10 sweeps in east central area alfalfa fields. (Hantsbarger). UTAH - Caused moderate damage to seed alfalfa in Millard, Cache, Duchesne and Uintah Counties. (Knowlton). IDAHO - Mostly *L. hesperus* and *L. elisus*, common, often abundant in alfalfa seed fields, many parts of southern section of State. Adults often 10 per sweep in seed fields sampled in Weiser area. General movement of adults into alfalfa seed fields from newly cut hay fields, many parts of southwestern section. (Gittins, Foote). Mostly *L. hesperus* increased to point necessitating second treatment in many alfalfa seed fields. Exceeded 30 per sweep in red clover fields. (Waters).

PLANT BUGS - SOUTH DAKOTA - Nymphs heavy in east central alfalfa fields, with 9 *Adelphocoris rapidus* and 20 *A. lineolatus* per 10 sweeps. (Hantsbarger). WISCONSIN - Of the plant bugs that reduce alfalfa yields, *A. lineolatus* is most abundant in alfalfa and *A. rapidus* less. (Wis. Coop. Sur.).

SAY STINK BUG (*Chlorochroa sayi*) - NEVADA - Increased on seed alfalfa in Pahrump Valley, Nye County. Averaged 2 per sweep. (Bechtel, Zoller, July 25).

LEAFHOPPERS (*Empoasca* spp.) - OKLAHOMA - Adults common, 10-14 per 10 sweeps, in McCurtain County alfalfa. (Coppock). WISCONSIN - Relatively high catch occurred in Middleton light trap, July 29. (Wis. Coop. Sur.).

THREE-CORNERED ALFALFA HOPPER (*Spissistilus festinus*) - LOUISIANA - Totaled 892 per 100 sweeps in an experimental untreated plot, Caddo Parish. Averaged 44 per 10 sweeps in fields, East Baton Rouge Parish. (Spink). TEXAS - Averaged 5-15 per sweep in alfalfa, Burleson and Brazos Counties. (Randolph). OKLAHOMA - Heaviest numbers of year in alfalfa statewide, with 20-30 per 10 sweeps. (Coppock).

POTATO LEAFHOPPER (*Empoasca fabae*) - DELAWARE - Increased on alfalfa. (MacCreary, Conrad). NORTH CAROLINA - Probably this species, injured peanuts in Martin County and reported as serious throughout the peanut area. (Stewart, Young). VIRGINIA - Medium on peanuts in Nansemond, Isle of Wight and Southampton Counties. Averaged 8-10 per sweep in 2 fields and 5 in one field. (Boush). WISCONSIN - Averaged about one per sweep in alfalfa in southern sections, but counts of 8 per 100 sweeps or lower were recorded in Buffalo, Clark, Jackson and Wood Counties. (Wis. Coop. Sur.). INDIANA - Flights increasing in Tippecanoe County, with 1,913 taken in light trap July 23-29. (Deay).

SPIDER MITES (*Tetranychus* spp.) - IDAHO - Appeared in most red clover and alfalfa seed fields in Canyon and Owyhee Counties. Increased rapidly in many instances. (Waters).

THRIPS - UTAH - Very numerous in many Uintah and Duchesne County alfalfa fields, abundant on late spring barley in Manti area. Generally numerous on seed alfalfa blooms in Millard County. (Knowlton).

CUTWORMS - PENNSYLVANIA - *Spaelotis clandestina* on tobacco in Snyder County and on soybeans in Columbia County. (Gesell). *S. clandestina*, *Peridroma margaritosa* and *Pseudaletia unipuncta* present in hay in Huntingdon County. Fully mature larvae of *P. unipuncta* are most numerous, but not epidemic. (Udine).

GREEN CLOVERWORM (*Plathypena scabra*) - DELAWARE - Small second-brood larvae common on soybeans throughout State. Larger first-brood larvae more common on alfalfa. (MacCreary, Conrad).

BEAN LEAF BEETLE (*Cerotoma trifurcata*) - ARKANSAS - Present in some soybean fields. (Ark. Ins. Rpt.).

SOYBEAN CYST NEMATODE (*Heterodera glycines*) - A new infestation of about 50 acres was found in Mississippi County, ARKANSAS, and a 75-acre property in Pender County, NORTH CAROLINA, was confirmed infested. Eight additional samples collected in northwest FLORIDA in late December, 1957, were processed, and were all negative. Over 16,000 acres were surveyed in 13 counties of TENNESSEE. Only 6 were determined as positive, representing 3 fields in Dyer County, 2 in Lauderdale County and 1 in Obion County. (PPC, So. Reg., June Rpt.). One additional infested property was found in western Pemiscot County, MISSOURI, near the Arkansas line and one and one-half miles inside the regulated area. Sampling was continued in Minnesota, Wisconsin, Missouri, Illinois, Indiana, Ohio and Kentucky, weather and field conditions permitting. (PPC, Central Reg., June Rpt.).

VELVETBEAN CATERPILLAR (*Anticarsia gemmatilis*) - VIRGINIA - Several more moths taken in light trap at Painter, on Eastern Shore. (Hofmaster)

A BLACK POLLEN BEETLE (*Meligethes nigrescens*) - OREGON - Appeared earlier than normal and emergence reached peak rapidly. Populations dropped below economic levels by July 21. Normally remain active through first week of August. (Crowell, Dickason).

FLEA BEETLES - OKLAHOMA - Averaged 25-30 per foot of row on young sorghum in Stillwater area. (Henderson). WYOMING - *Phyllotreta striolata* averaged 63 per 20 sweeps in alfalfa in Sheridan County. (Davison).

CHINCH BUGS - GEORGIA - *Blissus* sp. heavy on centipedegrass in Screven County. (Johnson). MISSISSIPPI - *Blissus leucopterus insularis* serious in St. Augustine grass lawns in southern portion of State. (Hutchins). OKLAHOMA - Populations remained higher in southern and southeastern counties than in 1957, with up to 75 per plant on sorghum, Choctaw County. (Coppock).

FRUIT INSECTS

ORCHARD MITES - DELAWARE - P. ulmi more prevalent, occasional apple tree bronzed in Kent and Sussex Counties. (MacCreary, Conrad). MARYLAND - P. ulmi and T. telarius increasing on apples in Hancock area. (U. Md., Ent. Dept.). INDIANA - Populations continue heavy in apple orchards and some peaches in Vincennes area. Predominant species Panonychus ulmi. (Hamilton). Mites, both Tetranychus spp. and P. ulmi showing considerable pressure in Orleans area on apples. (Marshall). MICHIGAN - Tetranychus telarius becoming more common in apple orchards at Paw Paw and Benton Harbor. (Hutson). UTAH - Tetranychus spp. severely discoloring various fruits. Bryobia praetiosa complex discoloring peach and cherry foliage in north Ogden area. (Knowlton). P. ulmi and T. telarius attack on apples and pears most general and serious experienced in number of years at Providence. Generally Tetranychus spp. and P. ulmi dominant and more conspicuous than from spring of 1954. (Davis, Knowlton). NEW MEXICO - Heavy infestation of Bryobia praetiosa complex on untreated orchard in Chaves County; light and spotty in Lincoln, Sandoval and Valencia Counties. Tetranychus mcdanieli heavy many untreated orchards in Rio Arriba, Santa Fe, Lincoln, Otero, Sandoval and Valencia Counties. (N. M. Coop. Rpt.). WASHINGTON - Heavy populations of P. ulmi and Vasates spp. on apple, pear and cherries in Asotin County. (Brannon). High populations present in eastern area resulting from unusually high temperature. (Hoyt). OREGON - T. telarius and Eotetranychus carpini more abundant than any time during past 4 years on apple and pear trees in Hood River area. (Ellertson).

CODLING MOTH (Carpocapsa pomonella) - INDIANA - Sharp rise in fresh entries in apples at Orleans. (Marshall). WISCONSIN - Moderate populations of larvae and adults in Door County apples. (Wis. Coop. Sur., Jul. 26). CALIFORNIA - Heavy infestation of apples in Barstow area of San Bernardino County. Second-brood infestation in walnuts in Linden area of San Joaquin County less severe than in past several years. (Michelbacher). OREGON - Infestations heavier in Hood River area. Moth catches and infested fruit more plentiful than any time since 1953. (Ellertson). WASHINGTON - Second-brood flights at peak in Wenatchee, July 24. (Hoyt). UTAH - Infesting 10-30 percent of apples at Morgan; heavy infestation in Washington County. (Knowlton, Hughes).

LEAF ROLLERS - INDIANA - Comparatively large numbers in bait traps since July 20 at Vincennes. Predominant species in peaches is Platynota flavedana, while in apple orchards predominant species is Argyrotaenia velutinana. (Hamilton). WISCONSIN - Moderate to heavy populations of Archips argyrospila and moderate populations of A. velutinana on apples in Door County, July 26. (Wis. Coop. Sur.).

APPLE APHID (Aphis pomi) - WISCONSIN - Adults and nymphs moderate to heavy in Door County apple orchards. (Wis. Coop. Sur., July 26).

BLACK CHERRY APHID (Myzus cerasi) - WISCONSIN - Moderate to heavy adult populations migrating from cherry foliage to alternate hosts. (Wis. Coop. Sur., July 26).

APPLE MAGGOT (Rhagoletis pomonella) - INDIANA - Causing considerable damage to apples in northern tier of counties. (Marshall). MASSACHUSETTS - Heavy emergence at Waltham, July 24 - August 1. (Whitcomb). WISCONSIN - Medium populations of adults in apples in Door County, July 26. (Wis. Coop. Sur.).

WESTERN CHERRY FRUIT FLY (Rhagoletis cingulata indifferens) - IDAHO - Rather general infestation of cherries in Nampa. (Bechtolt).

PEAR-SLUG (Caliroa cerasi) - SOUTH DAKOTA - Damaging pear and cherry trees in south central area. (Hantsbarger).

CHERRY FRUITWORM (Grapholitha packardii) - WISCONSIN - Second and third instar larvae range from light to heavy on Door County Cherries. (Wis. Coop. Sur., July 26).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - INDIANA - Third-brood larvae entering peaches in Vincennes area. (Hamilton).

PEACH TWIG BORER (Anarsia lineatella) - CALIFORNIA - Heavy infestations in prune trees in Colusa area, Colusa County. (Cal. Coop. Rpt.). UTAH - Adults readily found in Utah County orchards. Infestation high in apricot fruits in Weber, Box Elder and Cache Counties. Some larval attack on peaches. (Knowlton, Davis). WASHINGTON - Damage to peaches lighter than in 1957 in eastern area. (Anthon).

YELLOW-NECKED CATERPILLAR (Datana ministra) - WASHINGTON - Damaging apple and cherry foliage in Asotin County. (Brannon).

PLUM CURCULIO (Conotrachelus nenuphar) - GEORGIA - Good control throughout season at Fort Valley. Post-harvest treatments will not be justified this year. (Snapp, July 28). WISCONSIN - Fourth and fifth-instar larvae heavy in unsprayed apples and light to moderate in unsprayed cherries in Door County on July 26. (Wis. Coop. Sur.).

BLACK SCALE (Saissetia oleae) - CALIFORNIA - Heavy infestations of olive trees in Woodland area of Yolo County. (Cal. Coop. Rpt.).

SAN JOSE SCALE (Aspidiotus perniciosus) - CALIFORNIA - Heavy infestation on pear trees in San Leandro area of Alameda County. (Cal. Coop. Rpt.).

FALL WEBWORM (Hyphantria cunea) - OREGON - Tents 3-5 per walnut tree in Salem area. Caterpillars in third to fourth instars. (Capizzi, July 27).

A BUPRESTID (Psiloptera drummondi) - NEW MEXICO - Adults clipping leaves and terminal growth of pecans in Dona Ana County. (N. M. Coop. Rpt.).

GOLDEN TORTOISE BEETLE (Metriana bicolor) - IDAHO - Heavy infestation on leaves of grapes and morningglory in Orofino. Considerable damage to leaves. (Bruce).

CITRUS BLACKFLY (Alurocanthus woglumi) - In Cameron and Hidalgo Counties, TEXAS, 22,682 trees on 450 properties were inspected. Results were negative. (PPC, So. Reg., June Rpt.). A single leaf from one tree at Tomaseno in the Municipio of Hidalgo, Tamaulipas, MEXICO, was the only infestation found in June. This is the first month in well over a year no infestations have been found in the State of Nuevo Leon. Inspections were made of 69,870 trees on 1,576 properties in the States of Tamaulipas and Nuevo Leon, and of 26,034 trees on 189 properties in the State of Sonora. No further infestations were found at Hermosillo, Sonora, in June. (PPC, Mex. Reg., June Rpt.).

MEDITERRANEAN FRUIT FLY (Ceratitis capitata) - Trapping continued in ALABAMA, FLORIDA, MISSISSIPPI and TEXAS, and operations were begun in GEORGIA and LOUISIANA. No suspicious specimens were found. (PPC, So. Reg., June Rpt.).

MEXICAN FRUIT FLY (Anastrepha ludens) - A total of 1,130 traps were in operation at Tecate, Tijuana and Ensenada, Baja California, MEXICO, with 453 properties trapped and 4,506 trap inspections made. No Mexican fruit flies were trapped. Visual inspections were made on 21 properties where about 100 sapota trees were growing. No larvae were found. (PPC, Mex. Reg., June Rpt.).

TRUCK CROP INSECTS

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - IDAHO - Common and occasionally abundant some potato fields in Raft River area. Considerable defoliation occurred in spots within fields not controlled. (Gittins, Foote). DELAWARE - Larvae heavy and damaging to potatoes and tomatoes some localities of State. (MacCreary, Conrad).

EUROPEAN CORN BORER (Pyrausta nubilalis) - MARYLAND - Infesting tomatoes on lower Eastern Shore. (U. Md., Ent. Dept.). DELAWARE - Damaging peppers. (MacCreary, Conrad).

CABBAGE LOOPER (Trichoplusia ni) - MARYLAND - Causing noticeable damage to tomatoes in Salisbury area. (U. Md., Ent. Dept.). DELAWARE - Common on potatoes and tomatoes and fairly common on peppers in areas of State. (MacCreary, Conrad). WISCONSIN - Large increase in Arlington area; light populations in cabbage fields in Racine-Kenosha area. (Wis. Coop. Sur.).

POTATO PSYLLID (Paratrioza cockerelli) - WYOMING - Numbers dropped substantially in Cheyenne area; averaged 3 adults per 50 sweeps on matrimonyvine. In Pine Bluffs-Albin area only 1 psyllid found on potatoes. None found in Goshen or Platte Counties on potatoes. (Davison, Aug. 1).

TOMATO HORNWORMS (Protoparce spp.) - NEW MEXICO - Continue to damage untreated tomatoes in Dona Ana and Luna Counties. (N. M. Coop. Rpt.).

TOMATO FRUITWORM (Heliothis zea) - WEST VIRGINIA - Heavy on tomatoes in Kanawha County. (W. Va. Ins. Sur.). UTAH - Counts on tomatoes very low in northern area. (Dorst).

TOMATO PINWORM (Keiferia lycopersicella) - CALIFORNIA - Medium infestation in tomatoes in Fresno area, Fresno County. (Cal. Coop. Rpt.).

A WHITEFLY (Trialeurodes sp.) - DELAWARE - Very common on potatoes in western New Castle County. (MacCreary, Conrad).

POTATO APHIDS - MAINE - Populations of Aphis abbreviata, Macrosiphum solanifolii, Myzus persicae and M. solani increasing very rapidly on untreated potatoes on Aroostook Farm in Presque Isle. Appreciable numbers may be present in untreated potatoes if present increase continues. (Shands et al.).

GREEN PEACH APHID (Myzus persicae) - IDAHO - Infestations in commercial potato fields in Idaho Falls area, averaging about 1 per 5-10 leaves. No infestations found in fields 25 miles north of area. (Bishop). WASHINGTON - Lowest populations on potatoes in eastern area for many years. (Landis).

FLEA BEETLES - MICHIGAN - Second generation at peak population at Bath, Lansing and Stockbridge. (Hutson, July 31). WYOMING - Small numbers of Disonycha xanthomelas and Phyllotreta striolata in several fields in Goshen County. (Davison, Aug. 1). RHODE ISLAND - Epitrix cucumeris adults at peak of activity. (Hansen).

BEEET LEAFHOPPER (Circulifer tenellus) - IDAHO - Incidence of curly top on tomatoes in home gardens in south central area quite high with considerable plants killed. (Gittins, Foote). UTAH - Losses to canning crops estimated at 2 million dollars with additional .5 to 1 million dollar loss to sugar beet, and other crops pending. Tomato crop estimated 20 percent reduced. (Knowlton). Curly top sufficient to reduce sugar beet yield 2-3 tons per acre. (Dorst).

BEEB WEBWORM (Loxostege sticticalis) - IDAHO - Second-generation infestations have not developed on beets in Blackfoot and Idaho Falls areas. Apparently damage by second generation in area will be minor. (Gittins, Foote).

APHIDS - MARYLAND - Present in pepper fields in Worcester and Wicomico Counties. One field seriously damaged. (U. Md., Ent. Dept.). MICHIGAN - Aphis fabae infesting lima beans and sugar beets about Bay City, Tuscola, Caro and Saginaw (Hutson).

MELON APHID (Aphis gossypii) - TEXAS - Heavy on watermelons in Jones County. (Hawkins). NEW MEXICO - Medium to heavy infestations on melons in home gardens in Dona Ana County. (N. M. Coop. Rpt.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - WYOMING - Averaged 2 adults and 4 larvae per 100 sweeps in Laramie, Goshen and Platte Counties. Light damage observed. (Davison, Aug. 1). DELAWARE - Adults and larvae common on lima beans in Sussex County. (MacCreary, Conrad).

BEAN LEAF BEETLE (Cerotoma trifurcata) - OKLAHOMA - Prevalent on beans in Payne County. (Bieberdorf).

A SCARAB (Pachystethus lucicola) - NORTH CAROLINA - Feeding in fields of snap beans in Macon County on June 18; no serious damage resulted. (Fagg, Cartwright).

GREEN CLOVERWORM (Plathypena scabra) - DELAWARE - Common on lima beans throughout State. (MacCreary, Conrad).

BEAN THRIPS (Hemiothrips fasciatus) - UTAH - Moderately numerous on beans in northern area. (Knowlton, July 28).

CABBAGE APHID (Brevicoryne brassicae) - MICHIGAN - Numerous on cabbage and cauliflower at South Haven and Benton Harbor. (Hutson, July 31).

PEPPER WEEVIL (Anthonomus eugenii) - NEW JERSEY - No weevils found in survey of all 1957 infested fields in State. Additional surveys will be made. (Ins. Dis. News1.).

PEPPER MAGGOT (Zonosemata electa) - NEW JERSEY - Eggs very numerous in untreated peppers at Bridgeton, July 28. (Ins. Dis. News1.).

ONION MAGGOT (Hylemya antiqua) - MICHIGAN - Under control in all onion growing areas. (Hutson, July 31). IDAHO - Peak numbers of second generation in southwestern area. Many onion fields with high populations of adults. (Scott). NORTH CAROLINA - Larvae caused one-third loss of onions in Bladen County during April. (Farrier, Banadyga, Foote).

LOOPERS - IDAHO - Attacking onion fields in Canyon County. Damage quite extensive some fields, control necessary. Also attacking weeds in hop fields. (Scott).

LYGUS BUGS (Lygus spp.) - OKLAHOMA - Heavily infesting sesame fields in north central area. (Henderson).

ARMYWORMS - CALIFORNIA - Light to medium infestations of Laphygma exigua and Pseudaletia unipuncta on safflower and castor beans in Yolo Bypass area of Yolo County. (Cal. Coop. Rpt.).

SALT-MARSH CATERPILLAR (Estigmene acrea) - DELAWARE - Feeding on lima beans, peppers and cantaloups in areas of State. (MacCreary, Conrad).

VARIEGATED CUTWORM (Peridroma margaritosa) - MICHIGAN - Damaging radishes at Beulah. (Hutson, July 31).

A WEEVIL (*Brachyrhinus rugosostriatus*) - WEST VIRGINIA - Found for first time in State in Kanawha County. (W. Va. Ins. Sur.).

SPIDER MITES - OREGON - Rapidly increasing on hops in Willamette Valley and Hermiston areas. Control required. *Tetranychus telarius* predominant species. (Morrison, Every). NEW MEXICO - Medium to heavy infestations of *T. telarius* on melons and squash in Dona Ana County. (N. M. Coop. Rpt.). WASHINGTON - *T. telarius* damaging beans in Adams County. (Brannon).

ROSE STEAM GIRDLER (*Agrilus rubicola*) - UTAH - Damaging many raspberry patches in Salt Lake, Utah and Davis Counties. Apparently first record of species west of Mississippi River. Det. G. B. Vogt. (Davis, Knowlton, July 26).

MEADOW SPITTLEBUG (*Philaenus leucophthalmus*) - WISCONSIN - Adults moderate to heavy on strawberry plantings in Door County. (Wis. Coop. Sur.).

STRAWBERRY LEAF ROLLER (*Ancylics comptana fragariae*) - WISCONSIN - Light to moderate numbers of third to fourth instar larvae on strawberry plantings in Door County. (Wis. Coop. Sur.).

COTTON INSECTS

BOLL WEEVIL (*Anthonomus grandis*) - NORTH CAROLINA - Infestations continue to increase in northern and piedmont counties. Control generally good. (Cott. News Lett.). SOUTH CAROLINA - Infestations continue to increase in Florence area. High infestations in untreated fields; low in treated fields. (Fye et al.). GEORGIA - Percent punctured squares averaged 45 in 32 northeastern and southeastern fields. (Johnson). ALABAMA - Infestations increasing in central area; ranging from 0-32 percent in treated fields; much higher in untreated fields. Infestations in Chilton, Cherokee and Cleburne Counties were 12, 9 and 10 percent respectively. (Grimes). TENNESSEE - First generation weevils still emerging most fields in western counties. Percent infestation averaged 6 percent in 65 infested fields of 186 surveyed. (Locke). MISSISSIPPI - Infestations generally below 5 percent in delta counties. (Merkl et al.). LOUISIANA - Percent infestation averaged 14 in Franklin Parish, 11.8 in Ouachita Parish, 15.7 in Caddo Parish, 15 in Avoyelles Parish, 10.9 in Rapides Parish and 9.3 in Morehouse Parish. Counts ranged 1-65 percent in 16 fields and averaged 11 percent in other fields in Tensas Parish. Second-generation weevils appearing throughout State. (Spink). Average infestation 6 percent in Madison Parish. (Smith et al.). ARKANSAS - Second-generation weevils present in early cotton in southeast area. For most areas of State, week of August 10 will probably be critical period for weevil control program. Percent infested fields 71 compared with 56.9 previous week. (Ark. Ins. Rpt.). MISSOURI - Only 29 fields of 791 surveyed had infestations ranging from 1 to 9 percent; all in Dunklin County. Light infestations reported common in Butler and Ripley Counties and appearing some fields along Crowley Ridge area of Stoddard County. (Kyd, Thomas). TEXAS - Continued to be problem, especially in eastern, south central, central, north central and northeastern areas. (Gaines). Infestation averaged 26.5 percent in treated fields and 55 percent in untreated fields in McLennan and Falls Counties. (Parenchia et al.). OKLAHOMA - Heavy damage in McCurtain County. Number of punctured squares 20-79 percent; most fields over 55 percent. Heavy "flaring" present. (Coppock).

BOLLWORMS (*Heliothis* spp. et al.) - NORTH CAROLINA - Larval counts decreased most treated fields. (Cott. News Lett.). Local severe outbreaks resulted in almost complete destruction of squares and young bolls on individual plants in some southeastern counties. At least 25 percent of plants involved some areas of fields. (Jones, Mistic, July 23). SOUTH CAROLINA - Small larvae appearing in cotton fields in Florence area. May become a major cotton threat in next two weeks. (Fye et al., July 30). GEORGIA - Egg counts ranged from 9-84 per 100

terminals, averaging 20, and larval counts ranged from 2-19 per 100 terminals, averaging 9, in 32 northeastern and southeastern cotton fields. (Johnson). ALABAMA - Infestations increasing in central area. Control warranted in Autauga County. (Grimes). MISSISSIPPI - Moth catches in traps extremely low. Few eggs and larvae many fields in delta counties. Occasionally heavy populations of larvae. (Merkel et al.). TENNESSEE - Damage varies widely from field to field in western counties. Counts ranged from 0-12 larvae per 100 terminals, averaging 5. No eggs found. (Locke). ARKANSAS - Moth emergence and egg deposition heavy in Arkansas River Valley, southeast, central, east central and some northeastern and southwestern areas. Percent fields infested was 60 compared with 44.5 the previous week. (Ark. Ins. Rpt.). MISSOURI - Total of 504 fields infested of 791 surveyed. Infestations ranged from 1-13 eggs and 1-11 larvae per 100 terminals. (Kyd, Thomas). LOUISIANA - Counts per 100 terminals averaged 3-9 larvae and 5 eggs in Tensas Parish. Percent infestation averaged 19.9 in Ouachita Parish, 7 in Caddo, 10 in Avoyelles, 8.2 in Rapides and 3.4 in Morehouse Parish.. (Spink). Average infestation 5 percent in Tallulah area. An average of 8.88 eggs and 2.91 larvae found per 100 terminals. Some untreated fields may require treatment. (Smith et al.). TEXAS - Continue a problem, especially in eastern, south central, central, north central and northeastern areas. (Gaines). Infestation averaged 10.9 eggs and 3.2 larvae per 100 terminals in McLennan and Falls Counties. Control still required some fields. (Parenchia et al.). NEW MEXICO - Light to heavy and spotty most cotton growing areas of State. Control being applied in Chaves and Eddy Counties. (N. M. Coop. Rpt.). ARIZONA - Populations increasing in Salt River and Santa Cruz Valleys. With exception of few heavily populated fields in Pinal County infestations generally low. (Bottger, Kauffman, Sheets). OKLAHOMA - Damage to bolls in southeastern area 3-6 percent. Percent terminals infested with eggs 30-60 percent in McCurtain County. (Coppock). NEVADA - Infestations in all fields very light. (Bechtel, Zoller, July 25).

APHIDS - SOUTH CAROLINA - Numerous in Florence area but fairly well scattered. (Fye et al.). GEORGIA - Light to medium infestations of *Aphis gossypii* in 12 counties. Heavy infestations in Burke and Screven Counties. (Johnson). ALABAMA - Heavy infestations of *A. gossypii* in central area. Control warranted many fields. (Grimes). MISSISSIPPI - Populations general in delta counties. Most damage light; some control required. (Merkel et al.). LOUISIANA - Counts averaged 1.59 per square inch in Tallulah area. (Smith et al.). TENNESSEE - Some heavy infestations in Ames Plantation area of Fayette and Hardeman Counties. (Locke). ARKANSAS - Present, but causing little damage generally. Extremely heavy some early treated fields. (Ark. Ins. Rpt.). TEXAS - Causing some damage. (Gaines). OKLAHOMA - Light, general infestation of *A. gossypii* in southeastern area. (Coppock). NEW MEXICO - *Aphis medicaginis* generally light with few heavy spots in some fields in Eddy, Chaves, Dona Ana, Luna and Socorro Counties. (N. M. Coop. Rpt.).

SPIDER MITES - SOUTH CAROLINA - Several infestations in Pee Dee area. General infestation not evident. Miticides being applied. (Fye et al.). GEORGIA - Light to moderate infestations of *Tetranychus* spp. in 15 counties. (Johnson). ALABAMA - Heavy infestations in Randolph County. Troublesome locally elsewhere. (Grimes). TENNESSEE - At least two species causing damage over western area. Lake County has heaviest infestations. Complete defoliation occurred in some fields. Control needed in Lake County area. (Locke). MISSISSIPPI - Generally present in delta counties. Most infestations light and doing very little damage. Some control required. (Merkel et al.). LOUISIANA - Severe infestations in St. Landry and Evangeline Parishes. Some plants defoliated. (Spink). Light spotted infestations few fields in Tallulah area. (Smith et al.). ARKANSAS - Populations increasing many areas of State. Spot treatments used and some field-wide applications made. (Ark. Ins. Rpt.). MISSOURI - Light to heavy infestations in 376 of 791 fields examined. Some spot defoliation occurring. Mites major problem of cotton in State at present. (Kyd, Thomas).

TEXAS - Causing some damage. (Gaines). NEW MEXICO - Infestations of Tetranychus desertorum generally light with few heavily infested fields in Chaves County. Generally widely scattered light to medium infestations in State. (N. M. Coop. Rpt.). ARIZONA - Light infestations in Deer Valley and vicinity of Eloy. (Bottger, Kauffman, Sheets). CALIFORNIA - Tetranychus atlanticus damaging cotton in Tranquillity area of Fresno County. (Cal. Coop. Rpt.).

PINK BOLLWORM (Pectinophora gossypiella) - Road station inspections in ARKANSAS were made of 127,320 vehicles and 871 labor crews, with 39 interceptions. In LOUISIANA, 328,120 blooms were inspected in 8 parishes. No pink bollworms were found. Bloom inspections were begun in Walthall County, MISSISSIPPI. Initial bloom inspections in central and south central TEXAS showed a general infestation, with some fields indicating a heavy population. Inspection of hibiscus blooms on Plantation Key, FLORIDA, uncovered 6 larvae, the first infestation of hibiscus found in that area since November 1957. (PPC, So. Reg., June Rpt.). A total of 19,713 blooms were inspected in Graham County, ARIZONA, with negative results. One moth was taken in the light trap at Solomon, which is in the heaviest infested area. In CALIFORNIA, 394,232 blooms were inspected in 113 fields totaling 7,735 acres. No pink bollworms were found. (PPC, West. Reg., June Rpt.). Around Guaymas, MEXICO, 4,232 blooms were inspected on 80 acres, with negative results. In the Sinaloa district, 319 bushels of gin trash were inspected with negative results and inspections of 1,085 bolls in 5 fields on 506 acres in the Culiacan district were also negative. A few small fields show as high as 17 percent infestation at Delicias and at Torreón, infestations are running from 10-15 percent. (PPC, Mex. Reg., June Rpt.).

CABBAGE LOOPER (Trichoplusia ni) - GEORGIA - Light infestations in 12 counties. (Johnson). ALABAMA - Heavy infestations in Coffee and Autauga Counties. In some areas one-third to one-half of foliage destroyed. Many loopers diseased. (Ruffin, Rawson). TEXAS - Causing some damage. (Gaines). NEW MEXICO - Light to medium and spotty in Dona Ana, Eddy and Chaves Counties. Polyhedrosis virus disease killing few loopers in spots in Dona Ana County. (N. M. Coop. Rpt.). ARIZONA - Infestations range from light to heavy. Many eggs on cotton in Maricopa County. (Bottger, Kauffman, Sheets).

LYGUS BUGS (Lygus spp.) - NEVADA - Light to moderate populations some cotton fields. Infestations may become heavy as adjacent alfalfa fields are cut and marginal weeds dry up. (Bechtel, Zoller, July 25). ARIZONA - As high as 65 per 100 sweeps in Buckeye area. Increasing generally over most of Salt River Valley. (Bottger, Kauffman, Sheets). NEW MEXICO - Infestations of L. elisus and L. hesperus decreased. Generally light in cotton growing areas. (N. M. Coop. Rpt.). TEXAS - Causing some damage. (Gaines). MISSISSIPPI - Damage caused by L. lineolaris and Adelphocoris rapidus apparent in many fields in delta counties where heavy populations occurred earlier. (Merkel et al.). LOUISIANA - Sufficient numbers of L. lineolaris present to cause damage in Tallulah area. (Smith et al.).

PLANT BUGS - MISSISSIPPI - Damage caused by Lygus lineolaris and Adelphocoris rapidus apparent in many fields in delta counties where heavy populations occurred earlier. (Merkel et al.). TENNESSEE - Causing square shed in parts of Obion and Lake Counties. Control needed several fields. (Locke).

STINK BUGS - NEW MEXICO - Medium to heavy scattered infestations of Chlorochroa ligata and C. sayi in Dona Ana County and many fields in Luna County. (N. M. Coop. Rpt.). ARIZONA - Populations very low in all fields, averaging .25 per 100 sweeps. (Bottger, Kauffman, Sheets).

FALSE CHINCH BUGS (Nysius spp.) - NEW MEXICO - Extremely heavy in many cotton fields in Roosevelt County and light to spotty infestations in Dona Ana and Luna Counties. No damage noted. (N. M. Coop. Rpt.).

WHITEFLIES - MISSISSIPPI - Medium to heavy infestations in delta counties. (Merkl et al.). ARKANSAS - Present in several areas of State. (Ark. Ins. Rpt.). CALIFORNIA - Medium infestations of Trialeurodes abutilonea on cotton in Blythe area, Riverside County. (Cal. Coop. Rpt.).

STALK BORER (Papaipema nebris) - MISSISSIPPI - Infestations causing noticeable damage to cotton in delta area of State. (Hutchins).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - IDAHO - Aedes sp. exceedingly abundant and causing considerable annoyance in the Little Lost River Valley area. (Gittins, Foote). Abundant in east end of Boise Valley. (Blair). NEVADA - Light to moderate populations of Anopheles sp. in several areas of Lincoln County. (Bechtel, July 25). CALIFORNIA - Aedes nigromaculis widely reported in San Joaquin Valley and Psorophora confinnis noted in Coachella Valley. (Peters). UTAH - Annoying in areas of Summit and Millard Counties. (Knowlton). MINNESOTA - In 311 larval collections made in the Twin City area July 23-31, Culex tarsalis was found 50 times and Culiseta inornata 5; in 83 biting collections Aedes vexans was taken 60 times, Culex tarsalis 5 and Culiseta inornata 1. (Minn. Ins. Rpt.) WISCONSIN - Increasing in Madison area. (Wis. Coop. Sur.). MISSOURI - Very heavy populations in most areas of State. Some extensive control measures applied in residential areas along the flooding Missouri River. (Kyd, Thomas). GEORGIA - Much more abundant this year than usual, Fort Valley. (Snapp). DELAWARE - Aedes sollicitans heavy in central Kent County. (MacCreary, Conrad).

HORN FLY (Siphona irritans) - KANSAS - Counts on unsprayed cattle in pastures of Clay, Marshall and Riley Counties averaged about 600 per animal. (Matthew) UTAH - Annoying cattle, Summit, Wasatch, Utah, Millard, Davis Cos. (Knowlton). OKLAHOMA - Average of 500-800 per cow in McCurtain County, 800-1200 per cow in Latimer County. (Coppock). SOUTH CAROLINA - Infestations in Oconee and Barnwell Counties. More than 500 flies on untreated animals. (Adkins).

HORSE FLIES - VIRGINIA - More numerous this year than usual in Goochland County on cattle and horses. (Truett). Heavy and troublesome on work stock in area of Lunenburg County. (Powers). Annoying to livestock and people in parts of Cumberland County. (Ayers). Problem statewide. (Morris). OKLAHOMA - Occur 4-9 per cow in Latimer County. (Coppock).

BROWN DOG TICK (Rhipicephalus sanguineus) - CALIFORNIA - Received from Berkley, Alameda County. (Peters). NORTH CAROLINA - Infestations in houses in Beaufort and Orange Counties. (Ashton, Farrier).

CHIGGERS - WISCONSIN - Numerous and troublesome in Buffalo County. (Wis. Coop. Sur.).

FLEAS - MARYLAND - Numerous in houses in Montgomery, Prince Georges and Howard Counties. (U. Md., Ent. Dept.). NORTH CAROLINA - Ctenocephalides felis numerous in many areas of State on cats and dogs. (Ashton). GEORGIA - More abundant than usual. Complaints of in homes, yards and on animals at Fort Valley. (Snapp).

SCORPIONS - KANSAS - More inquiries concerning scorpions this year than during previous years. This apparent increase in scorpion populations has brought more reports of stings than before. (Knutson).

SOUTHERN FIRE ANT (Solenopsis xyloni) - CALIFORNIA - Medium infestation in depot office at Corcoran, Kings County. Annoying people. (Cal. Coop. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

A SILVER-SPOTTED HALISIDOTA (*Halisidota argentata*) - OREGON - Adults very numerous in light trap collections week of July 20. In Douglas County up to 50 specimens one night, Polk County, 10-15 each night. (Capizzi).

FALL WEBWORM (*Hyphantria cunea*) - IDAHO - Tents common on locust, poplar and cherries in Whitebird area. (Gittins, Foote). NORTH DAKOTA - Some webbing of shade and fruit trees conspicuous. (N. D. Ins. Rpt.). RHODE ISLAND - Feeding on maple in Middletown area. (Stessel). DELAWARE - Greatly increased in Sussex County and starting in New Castle County. (MacCreary, Conrad). WEST VIRGINIA - Light infestation in Monogalia County. (W. Va. Ins. Sur.). NEW MEXICO - Damaging elms, poplars, cottonwoods and pecans in many areas of State. (N. M. Coop. Rpt.). ARKANSAS - Very heavy in southwest during July. Possibility of a partial third generation which might cause additional damage. Heavy on persimmon, pecan, walnut, hickory and elm. (Ark. For. Pest Rpt.).

A PINE TIP MOTH - ARKANSAS - Larval damage locally heavy in northern area in July. Large trees had 75 percent of tips attacked near Pine Bluff. Similar infestations in north central area from Conway, north to Harrison. Damage locally severe in plantings up to 15 years old with trees averaging 12-15 feet high. (Ark. For. Pest. Rpt.).

COTTONWOOD LEAF BEETLE (*Chrysomela scripta*) - SOUTH DAKOTA - Larvae damaged cottonwood trees in Edmunds County. (N. D. Ins. Rpt.).

RED-PINE CONE BEETLE (*Conophthorus resinosae*) - MICHIGAN - Active on new growth large red pine in Keweenaw, Leelanau, Manistee and Benzie Counties. (Hutson).

BLACK TURPENTINE BEETLE (*Dendroctonus terebrans*) - ARKANSAS - Increased activity in July at 10 locations in Pope, Lafayette, Perry and Hot Spring Counties. Control applied in few areas. (Ark. For. Pest Rpt.).

IPS BEETLES (*Ips* spp.) - ARKANSAS - Increase in activity during July in parts of Pope, Lafayette, Perry and Hot Spring Counties. Control applied at Malvern, Hot Spring County. In general, favorable growing weather has reduced incidence of *Ips*. (Ark. For. Pest Rpt.).

BIRCH LEAF MINER (*Fenusa pusilla*) - CONNECTICUT - Second generation heavily infesting and damaging birch foliage. More abundant than ever before, following a minor first generation. Third generation adults appearing. Det. J. C. Schread. (Johnson).

GREGARIOUS OAK LEAF MINER (*Cameraria cincinnatiella*) - NEW JERSEY - Prevalent on white oak in a number of counties. (Ins. Dis. Newsl.).

SARATOGA SPITTLEBUG (*Aphrophora saratogensis*) - WISCONSIN - Treatment of 1200-1300 acres in Oconto, Marinette, Florence, Oneida, Vilas and Price Counties completed on July 28. Adults emerged in Douglas and Bayfield Counties July 25 and emergence about complete in Price and northeastern counties on July 28. (Wis. Coop. Sur.).

JACK-PINE BUDWORM (*Choristoneura pinus*) - WISCONSIN - Pupated in Bayfield and Douglas Counties, moths seen July 21. Little defoliation evident in northwest area even where populations have been moderately heavy. Defoliation in west central area light or unnoticeable. One egg mass hatched in Jackson County. (Wis. Coop. Sur.).

RED-HUMPED CATERPILLAR (*Schizura concinna*) - CALIFORNIA - Medium infestation of roadside black walnut trees in Stockton area of San Joaquin County. Numerous egg clusters present. (Michelbacher).

ZIMMERMAN PINE MOTHS (Dioryctria zimmermani) - MICHIGAN - Actively defoliating trees in Cadillac area. (Hutson).

YELLOW-NECKED CATERPILLAR (Datana ministra) - DELAWARE - Feeding on oaks in New Castle and Sussex Counties. Light to moderately heavy damage in eastern New Castle County. (MacCreary, Conrad).

WALNUT CATERPILLAR (Datana integerrima) - DELAWARE - Feeding quite heavily on walnut trees throughout State. Many trees half to fully defoliated. (MacCreary, Conrad).

AN ALDER SAWFLY - IDAHO - Heavy defoliation of alders throughout area from St. Maries northward to Rathdrum Prairie area. (Manis).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - WISCONSIN - Summer emergence has begun. As of July 30, there were 1193 cases of Dutch elm disease in southeastern counties. (Wis. Coop. Sur.).

ELM LEAF BEETLE (Galerucella xanthomelaena) - IDAHO - Larval defoliation of untreated elms in Parma continues and several elms damaged so severely that they show no evidence of recovering from first attack. (Scott). NORTH CAROLINA - Larvae feeding on Chinese elm in Nash County. (Jones, Farrier). VIRGINIA - Medium on elms at Front Royal. (Weddle). WASHINGTON - Severely damaging elms at Prosser. (Telford). ARKANSAS - Damage in several areas of State. Control effective. (Ark. For. Pest Rpt.).

MIMOSA WEBWORM (Homadula albizziae) - VIRGINIA - Damaging mimosa trees in Loudoun County. (Rowell, Keyser). DELAWARE - Increased damage noted on mimosa throughout State. (MacCreary, Conrad). WEST VIRGINIA - Light on mimosa in Kanawha County. (W. Va. Ins. Rpt.). PENNSYLVANIA - Usual severe injury on honeylocust, Bedford. (Udine).

BAGWORMS - MISSOURI - Ornamentals in southeast attacked rather heavily. (Wkly. Rpt. Fr. Grs.). PENNSYLVANIA - Fair numbers on ornamentals in some areas of Allegheny County. (Udine). NEW MEXICO - Oiketicus townsendi damaging evergreen in Curry and Chaves Counties. (N. M. Coop. Rpt.).

BAGWORM (Thyridopteryx ephemeraeformis) - VIRGINIA - Heavy on some evergreen trees and shrubs in Isle of Wight County. (Rowell, Grizzard). Medium on arborvitae plants in Roanoke County. (Allen). DELAWARE - Feeding heavily on walnut trees and sycamores in western Kent County. (MacCreary, Conrad).

CATALPA SPINX (Ceratonia catalpae) - DELAWARE - Feeding heavily on catalpa throughout State. (MacCreary, Conrad)..

MOURNING-CLOAK BUTTERFLY (Nymphalis antiopa) - NEW MEXICO - Defoliating elms in Las Vegas, San Miguel County. (N. M. Coop. Rpt.).

A MINUTE CYPRESS SCALE (Carulaspis minima) - OKLAHOMA - A heavy infestation on foliage of red cedar at one locality in Oklahoma City, June 1. First report for State. (Apt).

SCALE INSECTS - CALIFORNIA - Lepidosaphes ulmi heavy on willows in Santa Clara, Santa Clara County. (Cal. Coop. Rpt.). UTAH - Gossyparia spuria severely damaging many elms in Ogden and elsewhere in Weber County (Knowlton). VIRGINIA - Unaspis euonymi very heavy on euonymus plants in Pulaski (Rowell, Griffin) and in Danville (Morris). Diaspis carueli may be building up on juniper plants in areas of southwest. Lepidosaphes ulmi damaging boxwood in some areas of southwest. (Miller, Thomson).

MITES - NORTH DAKOTA - Heavy infestations of spider mites on evergreens, shrubs and some perennial flowers in western area. Several infestations at scattered points in eastern section. (N. D. Ins. Rpt.). CALIFORNIA - A heavy infestation of Oligonychus platani on sycamores in Riverside, Riverside County. (Cal. Coop. Rpt.).

SPITTLEBUGS - NORTH CAROLINA - Tomaspis sp. unusually abundant this year and reports of terminal wilting associated with this insect especially on hollies. (Marshall, Farrier, Young). DELAWARE - Tomaspis bicincta causing injury to new growth of holly in New Castle County. (Stearns).

LUBBER GRASSHOPPER (Romalea microptera) - ALABAMA - Heavy infestation in Mobile County. Complete destruction of leaves and bulbs of lilies. (Counts, Bolton).

STORED-PRODUCT INSECTS

CADELLE (Tenebroides mauritanicus) - SOUTH DAKOTA - Damaged stored-corn in Grant County. (Hantsbarger).

KHAPRA BEETLE (Trogoderma granarium) - Inspections made in GEORGIA and TEXAS were all negative. (PPC, So. Reg., June Rpt.). One new infestation was found at Peoria in Maricopa County, ARIZONA. (PPC, West. Reg., June Rpt.). One new infestation was found at Colonia Camacho, Mexicali, Baja California, MEXICO, and one each at Colonia Progreso and Colonia Ahumadita, with a total of 123,819 cubic feet for fumigation. A total of 214 properties were inspected, 201 initial and 13 repeats, with 43 specimens submitted. Sixteen properties, totaling 1,061,781 cubic feet, were fumigated. Four were within the city limits of Mexicali and 12 were in the farm community of Ejido Puebla. (PPC, Mex. Reg., June Rpt.).

BENEFICIAL INSECTS

BUMBLE BEES (Bombus spp.) - WASHINGTON - Moderate populations, up to 15 per 25 square yards, in red clover seed fields in Chehalis area, Lewis County. Three species involved. (Johansen).

PREDATORS - IDAHO - Scymnus lacustris exceeded one per sweep in red clover field in northern Canyon County and Nabis sp. ranged 1-4 in some red clover fields. (Waters). WYOMING - Small numbers of Myrmeleon spp. in several alfalfa fields in Wheatland area. Nabis spp. extremely abundant in southeastern alfalfa fields. (Davison). NEBRASKA - Adults and nymphs of Orius spp. and Chrysopa spp. and nabid and coccinellid adults and larvae abundant in all northeastern corn fields with heavy populations of corn leaf aphid. (Andersen). UTAH - Damsel bugs, syrphid larvae and lady beetles in numbers in some Morgan County alfalfa fields severely infested with pea aphid. (Knowlton).

MISCELLANEOUS INSECTS

WHITE-FRINGED BEETLES (Graphognathus spp.) - In ALABAMA, 2,355 properties were inspected in 20 counties, and infestations were found on 1,685 acres at 55 locations in 7 counties. Treatment was applied to a total of 5,775 acres. Inspections were made of 449 sites in 6 FLORIDA counties. One 5-acre property was found infested for the first time in Calhoun County, and extensions were found on 475 acres in Escambia, Holmes, Santa Rosa and Walton Counties. Treatment was applied to 33 acres in Escambia County, 720 acres in Jackson County and 5 acres in Okaloosa County. In GEORGIA, 718 sites were inspected in 28 counties, with extensions totaling 1,537 acres found in Ben Hill, Bibb,

Coffee, Emanuel, Talbot, Turner and Wilcox Counties. One new infestation of about 300 acres was found in Talbot County near the Harris County line. Treatment was applied to a total of 2,200 acres. All surveys in LOUISIANA were negative. In MISSISSIPPI, 1,147 properties were inspected in 39 counties, with 39 properties in 3 counties found infested. Thirteen properties comprising 330 acres represented new finds. In NORTH CAROLINA, 75 sites in 10 counties were inspected, with one extension found in Duplin County. No additional infested acreage was found in SOUTH CAROLINA, as result of inspections of 25 sites in Darlington and Florence Counties. In TENNESSEE, first adult beetle was found June 20, about 3 weeks later than normal for the area. During latter part of June, 5 additional infested blocks were found in Memphis. Inspections were made in Crockett, Gibson, Hardin, McNairy, Obion and Weakly Counties, with negative results. (PPC, So. Reg., June Rpt.). ALABAMA - Additional infestations found in Autauga County near Prattville. Small additional acreage found on periphery of known infestations in other parts of State. (Owen).

IMPORTED FIRE ANT (*Solenopsis saevissima richteri*) - TEXAS - Treatment was started on 700 acres of State Hospital land on periphery of 3000-4000 acre infestation in southwestern San Antonio, Bexar County. Approximately 7000 acres treated in ALABAMA. Treatment completed on all infestations north of Birmingham. Two new spot infestations in Manatee County, FLORIDA, promptly treated. Minor extensions reported in Calhoun, Holmes, Jackson and Washington Counties treated as found. Treatment initiated in Milton and at Tyndall Air Force Base in Bay County. Aerial treatment completed in Dodge, Houston, Pierce and Tift Counties, GEORGIA, and 800 acres were treated on Ft. Benning reservation. LOUISIANA - 40,000 acres were treated in 19 parishes. MISSISSIPPI - Treatment was completed on 338 acres. NORTH CAROLINA - A 39-acre extension found in Onslow County. Treatment applied to 112 acres in Brunswick County and 359 acres in Onslow County. (PPC, So. Reg., June Rpt.). SOUTH CAROLINA - Infestation found on 120 acres in Florence County. Treatment was applied to 1,406 acres in Orangeburg County and 324 acres in Charleston County. (PPC, So. Reg., June Rpt.). ALABAMA - Positive determinations confirmed for first time for Clay, Chambers and Tallapoosa Counties. Infestations light and scattered. (Grimes).

JAPANESE BEETLE (*Popillia japonica*) - DELAWARE - Continued light to moderate feeding on soybeans throughout State. (MacCreary, Conrad). VIRGINIA - Medium in Shenandoah County. Problem in small grain harvested by combine. (Coiner). NEW JERSEY - Remained active in some areas on ornamentals. (Ins. Dis. Newsl.). FLORIDA - One adult trapped at International Airport at Tampa, Hillsborough County, July 23. (Rohwer). DELAWARE - Rather heavy feeding on asparagus ferns in New Castle and Kent Counties. (MacCreary, Conrad). MARYLAND - Browning favored food plants in sections of Washington County. (U. Md., Ent. Dept.). ALABAMA - Negative results obtained from traps operated in 168 locations in the State. (Grimes). TENNESSEE - Beetles were trapped for the first time in Hawkins and Monroe Counties. Beetles were also trapped in Cooke and Jefferson Counties, both within and outside of treated areas. GEORGIA - A total of 5,010 newly infested acres found in Clayton, Cobb, Dawson, De Kalb, Fulton, Hall, Lumpkin and Richmond Counties, during June, bringing the grand total to 159,655 infested acres. SOUTH CAROLINA - One adult beetle was trapped in Marlboro County. This is the first collection in that county. Traps operated in areas of LOUISIANA, MISSISSIPPI and TEXAS gave negative results. (PPC, So. Reg., June Rpt.). Two beetles were caught at different locations in St. Louis, MISSOURI, on June 19. Beetles had been caught in these areas in 1957, and in one case in 1956. Beetles were observed for the first time on June 25 in Zanesville and Cincinnati, OHIO, and on June 29 in Sheldon, ILLINOIS. (PPC, Central Reg., June Rpt.).

A PYRALID - NORTH DAKOTA - Larvae injured blossom buds of safflower at Beach, Golden Valley County. (N. D. Ins. Rpt.).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Protoparce sexta	quinq.	Heliothis zea	vires.
ALABAMA								
Crossville 7/28,31	5					61	42	
FLORIDA								
Quincy 7/24-30							28	5
ILLINOIS								
Urbana 7/25-31	132	9	29	172				
INDIANA(Counties)								
Orange 7/17-25	507	7		47	34	7	1	
Tippecanoe 7/23-29	908	8	7	398	1	2	1	
KANSAS								
Garden City 7/4-13, 17-27	2600	38		304		111	73	
Hays 7/1-8, 15-19, 21-23, 25-29	3774	94		533			70	
Manhattan 7/10-31	1303	86		164	5		33	
Wathena 6/4-9,15-22	212	24		28	54	34	3	
LOUISIANA								
Baton Rouge 7/25-31	1	1	56				9	
Franklin 7/28,30	3		23	1			1	
Shreveport 7/28,30	7	2					30	
MAINE								
Monmouth 7/20-8/2	15							
Orono 7/27-8/2	1							
MISSISSIPPI								
Grenada 7/21-8/1	15	1	5				4	
Senatobia 7/24-31		3						
State College 7/26-8/1	19	6	82				9	
*Stoneville 7/25-31	11	2	13				14	
NEBRASKA								
Alliance 7/14-18	3279	1		607		1	3	
Kearney 7/14-22	1494	32		540		5	64	
Lincoln 7/19-25	924	126		77			26	
North Platte 7/18-24	1613	23		867	2	6	15	1
Scotts Bluff 7/22-28	221			224		2		
NORTH CAROLINA								
Clayton 7/31	3	3	25		24	1	8	4
Faison 7/31	5	4	20		7	1	10	11
SOUTH CAROLINA								
Charleston 7/28-8/3	7	1	102	1	1		77	
Clemson 7/26-8/1	37	6	74	5	13	17	4	1
Florence 7/27-8/2	99	16	411	6	14	6	699	193

*Two traps-Stoneville.

LIGHT TRAP COLLECTIONS - Continued

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Protoparce sexta	Heliothis zea	quinq. vires.
TENNESSEE(Counties)							
Blount 7/22-28	135	6	288		9	12	15
Cumberland 7/22-28	607	15	109	21			6
Greene 7/22-28	324	16	220	4	8	8	
Johnson 7/22-28	256	35	46	18		1	1
Madison 7/22-28	45	1	139	12			7
Maury 7/22-28	365	6	75	33	12	33	6
Robertson 7/22-28	67	13	104	17	5	12	2

VIRGINIA(County)

*Pittsylvania 7/26-8/1 47 125

ARMYWORM (*Pseudaletia unipuncta*) - WISCONSIN - 7/22-28: *Arlington - 40;
Beaver Dam - 68; Gays Mills - 8; Janesville - 97; LaCrosse - 5;
Middleton - 10; Platteville - 4; Ripon - 74; River Falls - 49; Rosendale - 138;
*Theresa - 48; Waterford - 75; Waterloo - 12; Waumandee - 2.

*Three traps-Pittsylvania; 2 traps-Arlington; 3 traps-Theresa.

ADDITIONAL NOTES

ALABAMA - FALL ARMYWORM exceptionally heavy in several areas of State recently. Infested young corn in all areas. Moderate in grain sorghum in northern areas of State. (Eden). MEXICAN BEAN BEETLE moderate on soybeans in Escambia County. (Grimes). BLISTER BEETLES caused moderate damage to alfalfa in Dallas and Wilcox Counties. (K. Hays, S. Hays). EUROPEAN CORN BORER flights about over for present generation. New egg masses scarce. (Eden). GRASSHOPPERS in millet in east central areas. (Barwood). SOYBEAN CYST NEMATODE inspections negative in Baldwin and Mobile Counties. SWEETPOTATO WEEVIL infestations reduced 50 percent over 1957. Very light for 1958. MEDITERRANEAN FRUIT FLY traps operated in Baldwin and Mobile Counties gave negative results. (Grimes).

NEW YORK - ARMYWORM and FALL ARMYWORM reported from several areas about State. In Hudson Valley, EUROPEAN CORN BORER larvae appeared in emerging tassels. Injury as high as 8 percent reported. Moth emergence light, no sign of newly hatched larvae. CORN EARWORM extremely scarce in same area. CORN LEAF APHID in 50 percent of plants in some Hudson Valley locations, and CORN FLEA BEETLE averaged 4 per plant in unsprayed corn. SPIDER MITES increased slowly in Orleans County, damage not significant in Monroe County but plentiful in an occasional Wayne County orchard. RED-BANDED LEAF ROLLER present in all stages in Orleans County but few in numbers, as well as in Monroe County. Eggs and moths numerous in Wayne County, with first second-brood larva found July 29. (N. Y. Wkly. Rpt.).

CORRECTIONS

CEIR 8(28):619 - Under white-fringed beetles change Grapholitha spp. to Graphognathus spp.

CEIR 8(24):505 - The aphid carried under SPOTTED ALFALFA APHID from Virginia, has been determined as YELLOW CLOVER APHID (Therioaphis trifolii) by L. M. Russell.

CEIR 8(30):658 - Under LARCH SAWFLY - PENNSYLVANIA - should read cocooning instead of pupation.

CEIR 8(31):676 - Under BOLL WEEVIL - MISSISSIPPI - Change Smith et al. to read Merkl et al.

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Cooperative
ECONOMIC INSECT
REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GRASSHOPPERS in economic numbers in several Wisconsin counties and severe in some areas of Minnesota. Threatening to severe in central and north central areas of Kansas where controls have not been applied. Caused some damage in Oklahoma and are heavy, with severe damage in crop areas of New Mexico. (p. 711).

EUROPEAN CORN BORER first generation lower in some areas of Illinois than in 1957, but higher in others. Moth flight heavier in southern Iowa than in 1957. Found for first time in Dallas County, Arkansas. (p. 711). CORN EARWORM adult increased in several crops in Alabama. Heavy on corn in several areas of New Mexico. (p. 712).

FALL ARMYWORM caused serious damage in Massachusetts and continued damaging throughout Maryland. Heavy and general throughout Louisiana. (p. 712).

SOUTHWESTERN CORN BORER found for first time in Union County, Arkansas. (p. 712). CORN LEAF APHID increased in southern Wisconsin corn. Medium to heavy in areas of Texas and abundant in northeast and east central Nebraska. (p. 713).

ARMYWORM damaged corn in Massachusetts. Heavy in some areas of Tennessee and eastern North Carolina. Larvae heavy in localized area of Fall River County in South Dakota and at Placerville, California. (p. 714).

CLOVER SEED WEEVIL found for first time in Utah. SPOTTED ALFALFA APHID found for first time in Christian County, Kentucky. (p. 715).

EUROPEAN EARWIG epidemic worst since 1955 in Washington. (p. 720).

BUDWORM infestation in tobacco greatest since 1956 in Florida. (p. 721).

BOLL WEEVIL infestations continued high in southeastern states. (p. 721). BOLLWORMS making second appearance in South Carolina, remain threat to young bolls in Florence area (p. 722) where light trap catch was high (p. 729).

VARIABLE OAK LEAF CATERPILLAR defoliated large acreages in areas in Maryland. (p. 724). JAPANESE BEETLE found for first time in Cherokee County, North Carolina. (p. 727).

CORRECTIONS and ADDITIONAL NOTES. (p. 728).

INSECTS not known to occur in the United States. (p. 731).

WEATHER OF THE WEEK ENDING AUGUST 11

Above-normal temperatures, continued mostly dry weather in the Far West and less rainfall and fewer severe local storms east of the Continental Divide was last week's general weather pattern. The week was unseasonably warm nearly everywhere, but relative to normal was warmest in the northern Great Plains and Southwest where departures ranged up to 6°. In northern areas where June and July have been unusually cool, many states, including Wyoming, Wisconsin, Illinois and New Jersey, reported their warmest week of the summer to date. Maximum temperatures in the northern Great Plains rose into the 100's on the 8th and 9th, Bismark, N. Dak., recording 107°, the highest temperature there since 1949. Maximum temperatures were 90° or above virtually every day in southern areas and on one or more days elsewhere, except along the Pacific coast, in the Great Lakes region and parts of the Northeast, where they ranged in the 70's and 80's.

East of the Continental Divide, areas with heavy rainfall were less extensive than for previous weeks. This is particularly true in the area extending from the central Great Plains eastward through the Ohio Valley to the Appalachians. Nevertheless, local downpours caused more flash floods in eastern Kansas and Oklahoma, and in West Virginia. In the lower Ohio and most of the middle Mississippi Valleys, hot, sunny, humid weather favored rapid crop growth. In the North Central Interior, more moisture is still needed in many sections, particularly in the northern two-thirds of Michigan, Wisconsin, parts of Minnesota and in most of the Dakotas and eastern Montana. Elsewhere east of the Rockies, soil moisture is mostly adequate, although a general rain from New Mexico to Georgia would be helpful. In the Far West, heavy rains were limited mostly to the southern Sierras and Mohave Desert of California and southwestern Arizona. A few flash floods were reported in southern California. Several range fires occurred in Idaho and Washington. (Summary supplied by the U. S. Weather Bureau).

CEARAL AND FORAGE INSECTS

GRASSHOPPERS - MARYLAND - Very severe in field corn in Talbot County; damaged corn in Worcester County. General on soybeans in low numbers. (U. Md., Ent. Dept.). WISCONSIN - Hatch completed in Waupaca and Shawano Counties, with first and second-instar nymphs observed. Third to fifth instars averaged 50-75 per square yard. Adults also present. Economic numbers in Marinette, Marathon, Portage, Oconto, Manitowoc, Kewaunee and Waushara Counties with 6-40 nymphs per square yard. Noticeable damage in fields with 35-40 per square yard. (Wis. Coop. Sur.). MINNESOTA - Checks in Koochiching, Itasca, Cass, St. Louis, Aitkin and Carlton Counties showed Camnula pellucida and Melanoplus femur-rubrum to be dominant species. C. pellucida are adults and depositing eggs. M. femur-rubrum in second to fourth instars. Some fifth instar and adult M. bivittatus found. Grasshoppers averaged 25 per square yard on ditch bank at one place in northern Koochiching County, and averaged 20-30 in fields in northern Cass, southern Itasca and one field in central Carlton County. Generally low in northwest, west central, south central and southeast districts, with some high counts on field margins. Newly hatched M. femur-rubrum still present. (Minn. Ins. Rpt.). NORTH DAKOTA - Adult survey in Ransom and Richland Counties showed infestation at non-economic levels. Dominant species was M. bivittatus, followed by M. femur-rubrum and M. bilituratus. (N. D. Ins. Rpt.). KANSAS - Summer adult survey continued. Populations in 6 central and 5 north central counties ranged generally non-economic to threatening in crop lands, non-economic to light in rangeland and pastures. Averaged 1-26 per square yard in alfalfa fields, 1-7 in wheat stubble, 1-9 in grain sorghum and 1-9 in corn. M. differentialis, M. bivittatus and M. bilituratus were dominant species. No new evidence of prevalence of fungus disease in any fields examined, no parasitic larvae in any grasshoppers examined. Counts at this time would surely be much higher if extensive spraying had not previously been applied. Threatening to severe in areas where controls have not been applied, as evidenced by stripped corn plants and defoliated alfalfa. Heavy feeding on leaves of grain sorghum and active feeding on the grain in the heads, in these areas. Spraying in progress in many areas to protect corn, sorghum and alfalfa seed crop. (Matthew, Forslund). OKLAHOMA - Averaged 4-12 per square yard on rangeland in north central counties, 3-8 in central and south central counties. Slightly higher along roadsides. Second-generation M. bivittatus, M. differentialis and M. bilituratus statewide. Damage light to severe in margins of alfalfa, mungbeans and late-planted sorghums in central area. (Coppock). TEXAS - Light populations of Dissosteira longipennis were found in Dallam, Hartley and Sherman Counties. (Cowger). NEW MEXICO - Heavy, severely damaged field crops in Colfax, Harding, Rio Arriba, Bernalillo, Sandoval, Valencia, Socorro and Quay Counties. Light, 1-5 per square yard in Lea County. M. occidentalis, Aulocara elliotti and Drepanopterna femoratum dominant species. Trimerotropis pallidipennis over most of Grant and Hidalgo Counties. (N. M. Coop. Rpt.). UTAH - Spotted, but caused local damage in several counties. (Knowlton).

EUROPEAN CORN BORER (Pyrausta nubilalis) - NEW JERSEY - Activity remained at a low level in central area of State. (Ins. Dis. News1.). DELAWARE - Common in ears of sweet and field corn throughout Kent and Sussex Counties. (MacCreary, Conrad). MARYLAND - Generally low in sweet corn. (U. Md., Ent. Dept.). VIRGINIA - Continued very heavy in sweet corn on Eastern Shore. (Hofmaster). NORTH CAROLINA - In peanut stems in Gates County. (Newsome, Farrier). ALABAMA - Second-generation larvae light in grain sorghum, few pupae in corn. (Eden). WIS. - First-brood infestation in Jefferson, Washington, Dodge and Fond du Lac Counties averaged 9 percent in early field and sweet corn. Over half of larvae in fourth instar, no pupae observed. (Wis. Coop. Sur.). MINNESOTA - Majority in third instar. Development increased by hot weather. Pupation 10 percent in south-east district. (Minn. Ins. Rpt.). ILLINOIS - First-generation populations lower than a year ago in central and southwestern areas but higher in western, northwestern and northeastern parts of the State. Increase will be noticeable in late-maturing corn. (Ill. Ins. Rpt.). IOWA - Moth flight in southern

two-thirds of State heavier than in 1957. (Iowa Ins. Inf.). ARKANSAS - Found for first time in Dallas County on corn. (Ark. Ins. Rpt.). NORTH DAKOTA - First generation generally at non-economic levels. Mostly third instar. (N. D. Ins. Rpt.). SOUTH DAKOTA - Infestations averaged 44 percent in east central district, with 70 larvae per 100 plants. Larvae in third to fourth instars, with third instar dominant. (Hantsbarger, Klix). NEBRASKA - Egg deposition for second brood has begun. Counts light, averaged 14 per 100 stalks in northeast and 20 in east central area. (Andersen). KANSAS - No evidence of first-brood activity found in corn fields examined in irrigated area of northern Jewell and Republic Counties. (Mathew).

CORN EARWORM (*Heliothis zea*) - MASSACHUSETTS - Retarded by cool weather, but increasing slowly. (Crop Pest Cont. Mess.). NEW JERSEY - Activity still light as of August 4, except in area around Indian Mills, Burlington County. (Ins. Dis. Newsl.). DELAWARE - Common in field corn ears. (Conrad, MacCreary). MARYLAND - Generally low in sweet corn. (U. Md., Ent. Dept.). VIRGINIA - Caused medium damage to corn in Orange County. (Morris, Estes). None found on peanuts or soybeans surveyed in James City, Princess Anne, Nansemond, Southampton and Greensville Counties. (Morris). NORTH CAROLINA - Oviposition count on corn silks at Faison for last 3 weeks averaged 0.93, 6.1 and 11.2 eggs per silk. (Farrier). GEORGIA - Moderate on-pearl millet in Lowndes County and on grain sorghum in Macon County. (Johnson). ALABAMA - Adults increased in number in several crops. Larvae on peanuts in southeastern section and adults on same crop in Conecuh County. (Eden). Large numbers of adults observed on soybeans in Baldwin County. (Ruffin, Grimes). ARKANSAS - Large numbers in late-planted corn and on grain sorghum. (Ark. Ins. Rpt.). NEBRASKA - Appeared in field corn. Light, averaged 2 per 10-ear sample. (Andersen). OKLAHOMA - Averaged 2-12 per head on sorghum in Carter County, lighter in surrounding counties. (Flora). TEXAS - Averaged one per head in late grain sorghum in Brazos, Burleson and Robertson Counties. Heavily ragged leaves of peanuts in Frio County. (Randolph). NEVADA - Heavy on sweet corn in Fallon area, Churchill County. (Bechtel, Aug. 1). COLORADO - Late-instar larvae feeding on tassels in Delta County, many have pupated. (Exp. Sta. Ext. Ser.). NEW MEXICO - Heavy on corn in Torrance, Rio Arriba and Sandoval Counties. (N. M. Coop. Rpt.).

CORN ROOTWORMS (*Diabrotica* spp.) - SOUTH DAKOTA - Counts light, averaged one beetle per 20 sweeps in alfalfa fields in east central and southeast areas. (Hantsbarger, Klix). NEBRASKA - *D. longicornis*, *D. virgifera* and *D. undecimpunctata* howardi caused extensive damage to silks of corn in northeast and east central areas. (Andersen). COLORADO - *D. virgifera* feeding on leaves and silks, 5-10 per plant, Mesa County. (Exp. Sta., Ext. Ser.).

FALL ARMYWORM (*Laphygma frugiperda*) - MASSACHUSETTS - Caused serious damage to corn and related crops. (Crop Pest Cont. Mess.). NEW JERSEY - Egg masses found on field corn in Burlington County area. (Ins. Dis. Newsl.). DELAWARE - Heavy damage to late field corn in southeastern Sussex County. (MacCreary, Conrad). MARYLAND - Continued to damage late sweet corn throughout State, also damaged silage corn in southern and central sections. Spotty in mature corn, damage negligible. (U. Md., Ent. Dept.). VIRGINIA - Damaged whorls of corn used for ensilage in Culpeper County (Rowell, Heltzel), and feeding on peanut leaves and acting as shatterworms on grain sorghum in Sussex County fields (Morrison, Parson). Heavy in some corn fields. (Greenwood). GEORGIA - Moderate on grain sorghum in Baldwin, Seminole and Sumter Counties, heavy in Brooks County. Light on coastal Bermuda grass in Brooks and Colquitt Counties. (Johnson). ALABAMA - Larvae observed on peanuts in southeast section and adults on same crop in Conecuh County. (Eden). Large numbers of adults on soybeans in Baldwin County. (Ruffin, Grimes). LOUISIANA - Heavy in late corn in Ouachita Parish and generally throughout State. (Spink). ILLINOIS - Abundant in late corn in southern area. (Ill. Ins. Rpt.). ARKANSAS - Large numbers in late-planted corn and on grain sorghum. (Ark. Ins. Rpt.).

KANSAS - Light to moderate in few corn fields examined in Ellsworth, Lincoln, Mithcell, Cloud and Jewell Counties. Infestations ranged 4-28 percent in late-planted corn now showing tassel. (Matthew). TEXAS - Averaged 1-2 per stalk on grain sorghum in Robertson County. (Randolph).

SORGHUM WEBWORM (*Celama sorghiella*) - ARKANSAS - Larvae heavy on heads of sorghum grain in some areas. (Ark. Ins. Rpt.). TEXAS - Averaged 5-25 per head in scattered fields of late grain sorghum in Burleson County. (Randolph).

DUSKY SAP BEETLE (*Carpophilus lugubris*) - DELAWARE - Adults and larvae numerous in corn. (MacCreary, Conrad).

SOUTHWESTERN CORN BORER (*Zeadiatraea grandiosella*) - ARKANSAS - Moths emerging in southwestern part of State, Few larvae in corn stalks, mostly pupae. Found in Union County for a new record. (Ark. Ins. Rpt.).

CHINCH BUG (*Blissus leucopterus*) - KANSAS - Nymphs heavy in localized areas in grain sorghum fields in parts of Saline, McPherson and Rice Counties. Heaviest on plants already headed. Few plants showed considerable stunting. (Matthew). OKLAHOMA - Severe damage to one field of corn in Lincoln County, with thousands of nymphs and adults per plant. Lighter damage to other corn fields and sorghum in same area. (Coppock).

FALSE CHINCH BUGS (*Nysius* spp.) - TEXAS - Heavy on grain sorghums in Swisher and Lynn Counties. (Hawkins). IDAHO - Mass migrations of *N. ericae* occurred in Franklin County. (Bishop).

CORN LEAF APHID (*Rhopalosiphum maidis*) - ALABAMA - Light on grain sorghum in northern section. (Eden). DELAWARE - Increased on early and mid-season field corn throughout State. (MacCreary, Conrad). WYOMING - Continued to increase throughout Laramie, Goshen and Platte Counties. Little damage will probably result, as most corn has already been pollinated. (Davison). VIRGINIA - Heavy on sorghum in some fields of Nansemond, Southampton, Isle of Wight and Princess Anne Counties. Predators have about brought them under control. (Boush). WISCONSIN - Increased in southern corn fields. Up to 52 percent of tassels infested in some Grant and Jefferson County corn fields. Populations high in Eau Claire County corn fields. (Wis. Coop. Sur.). NORTH DAKOTA - Light to moderate in eastern section corn. Predators abundant in all fields. (N. D. Ins. Rpt.). TEXAS - Medium to heavy in late grain sorghum in Brazos, Burleson and Robertson Counties. (Randolph). NEBRASKA - Continued abundant in most corn and milo fields in northeast and east central regions. Predators and parasites very abundant. (Andersen). MINNESOTA - High numbers on corn throughout State. (Minn. Ins. Rpt.). ILLINOIS - Increasing but still not of great concern. (Ill. Ins. Rpt.). NEW MEXICO - Heavy on corn near Moriarty, Torrance County, light to heavy on sorghum, Quay, Colfax and Torrance Counties. (N. M. Coop. Rpt.).

A SYRPHID (*Mesogramma polita*) - VIRGINIA - Heavy on corn tassels in Princess Anne County corn field. (Morris, Cockrell).

EUROPEAN EARWIG (*Forficula auricularia*) - IDAHO - Abundant in corn fields throughout southern, eastern and south central areas. (Manis, Gittins, Foote).

ENGLISH GRAIN APHID (*Macrosiphum granarium*) - NEW MEXICO - Medium to heavy on wheat, Colfax County. (N. M. Coop. Rpt.).

STINK BUGS - NEW MEXICO - *Chlorochroa ligata* and *Acrosternum hilare* light on small grains, heavy on seed alfalfa, Quay and Colfax Counties. (N. M. Coop. Rpt.). UTAH - Caused conspicuous damage to fall grains in Lakepoint area, with estimated 75 percent reduction in yields. Severely damaged barley in Vernon area. Control required in some Millard County alfalfa seed fields. (Knowlton).

LOUISIANA - Oebalus pugnax averaged 5.8 adults and 7 nymphs per 50 sweeps in 11 rice fields in Jefferson Davis, St. Landry and Calcasieu Parishes. Ranged 100-300 per 100 sweeps at Gueyden, Vermilion Parish. (Spink).

EUROPEAN CHAFER (Amphimallon majalis) - First adults of season caught on evening of June 17 in two exploratory traps south of Newark, NEW YORK, and first flight observed in same location June 23. First adults also observed in area of original infestation at Meriden, CONNECTICUT, June 24. (PPC, East. Reg., June Rpt.).

ARMYWORM (Pseudaletia unipuncta) - MASSACHUSETTS - Caused serious damage to corn and related crops. (Crop Pest Cont. Mess.). RHODE ISLAND - Nearly full-grown larvae heavy in small millet field near Westerly. Caused complete defoliation of 10 acres of field corn and crabgrass ground cover in North Kingstown. (Hansen, Kerr). TENNESSEE - Heavy in Bradley County, 10-15 per square foot in Sudan grass and millet. (Bennet). NORTH CAROLINA - Very heavy on some military reservations in eastern part of State. (PPC). Cleared cover crop on 5 acres of orchard in Henderson County and one-quarter to one-half of field of sorghum and soybeans for silage. Other fields infested. (Jones, Farrier). MINNESOTA - Reported in Fergus Falls area in oats damaged by hail and which have stood out after heavy rains. Some treatment may be warranted to produce crop from hail-damaged fields, and to prevent movement into other crops. (Minn. Ins. Rpt.). SOUTH DAKOTA - Larvae averaged 40-50 per square foot in wheatgrass in localized area of Fall River County. (Hantsbarger, Klix). CALIFORNIA - Locally heavy on corn at Placerville, El Dorado County. (Cal. Coop. Rpt.).

ARMYWORMS - NEW JERSEY - Lawn grasses and Sudan grasses present hosts in Warren, Mercer and Atlantic Counties. Infestations light to moderate, widely scattered. Field corn large enough to withstand infestations in most areas. Sudan grass and brome grass in alfalfa may be seriously damaged and need protection. (Ins. Dis. Newsl.). GEORGIA - Heavy on grain sorghum and millet in Gwinnett and Hall Counties. (Johnson). NEVADA - Laphygma exigua damaged alfalfa in Pershing County, August 1. (Bechtel).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - UTAH - Caused some damage to alfalfa in eastern Millard County. (Knowlton). VIRGINIA - Very light on peanuts in peanut growing area of State. (Boush).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - IDAHO - Late-instar larvae common but not abundant on eastern and east central alfalfa fields. Averaged one per sweep in seed fields near Delco, less than one per 5 sweeps in most other fields. (Gittins, Foote).

VELVETBEAN CATERPILLAR (Anticarsia gemmatilis) - ALABAMA - Few larvae observed on peanuts in Conecuh County, light numbers on soybeans in Baldwin County. (Grimes). Large numbers of adults on soybeans in Baldwin County. (Ruffin, Grimes).

WEBWORMS (Loxostege spp.) - KANSAS - Moderate to heavy, 10-40 percent tip infestation in alfalfa in widely scattered localized areas in Clay, Sabine, Ellsworth and Lincoln Counties. Adults averaged 15 per 25 sweeps in one alfalfa field beginning new growth. (Matthew). NORTH DAKOTA - Scattered, heavy L. sticticalis larval infestations damaged flax in Benson, Towner, Cavalier and Renville Counties. (N.D. Ins. Rpt.). OKLAHOMA - Remained light to very light on alfalfa throughout State. Damage much less than during past two years. (Coppock).

ALFALFA WEEVIL (Hypera postica) - MASSACHUSETTS - Very light, 1-3 larvae per 100 sweeps in alfalfa. (Lavigne, Shaw, July 31).

CLOVER ROOT CURCULIO (*Sitona hispidula*) - MASSACHUSETTS - Damage light. Adults moderately abundant, 17 per square foot on alfalfa. (Lavigne, Shaw, July 31).

CLOVER SEED WEEVIL (*Miccotrogus picrostris*) - UTAH - Found east of Smithfield, Cache County, June 7. First record for the State. Det. R. E. Warner. (Knowlton).

BEAN LEAF BEETLE (*Cerotoma trifurcata*) - MARYLAND - On soybeans generally, in low numbers. (U. Md., Ent. Dept.). VIRGINIA - Heavy on soybeans in many fields in southeastern area. (Greenwood, Boush).

BLISTER BEETLES - RHODE ISLAND - *Epicauta pestifera* adults caused light damage on alfalfa in North Kingstown area. (Hansen, Boaro). OKLAHOMA - Light, general in alfalfa throughout State. Heavy in Alfalfa County, very spotted in fields with 0-90 adults per 10 sweeps. (Coppock). NEW MEXICO - Probably *Epicauta corvina*, light to heavy and spotty in small grains and alfalfa, Colfax County. (N. M. Coop. Rpt.).

A COLASPIS (*Colaspis* sp.) - LOUISIANA - Averaged 37 per 50 sweeps on lespedeza in St. Landry Parish. (Spink).

GREEN CLOVERWORM (*Plathypena scabra*) - ARKANSAS - Present in several areas, but control measures have not been required. (Ark. Ins. Rpt.). MARYLAND - Damage to soybean leaves in 5 counties. (U. Md., Ent. Dept.). DELAWARE - Common in alfalfa and clover throughout State. First to third-instar larvae common to prevalent on soybeans. (MacCreary, Conrad). VIRGINIA - Light in each of 3 fields surveyed in Princess Anne, Southampton, Nansemond and Greenville Counties. (Morris).

JAPANESE BEETLE (*Popillia japonica*) - DELAWARE - Decreasing on forage crops. (MacCreary, Conrad). MARYLAND - Damage to soybeans sporadic. (U. Md., Ent. Dept.). VIRGINIA - Going through thrashing machines and getting into small grain in some eastern areas, causing quarantine problem. Heavy only in spots of eastern part of State where they were generally heavy in 1957. (Williams). Much lighter in Holland area of Southampton and Nansemond Counties than in 1957. (Boush).

MEXICAN BEAN BEETLE (*Epilachna varivestis*) - ALABAMA - Very light on soybeans in southern part of State. (Grimes). MARYLAND - In low numbers generally on soybeans. (U. Md., Ent. Dept.).

PEA APHID (*Macrosiphum pisi*) - MASSACHUSETTS - Unusually light. Ranged 0-6 per 100 sweeps in vicinity of Amherst, 0-10 in Berkshire County and 0-61 in Worcester County. (Lavigne, Shaw, July 31). DELAWARE - Slight increase. (MacCreary, Conrad). KANSAS - Found in most alfalfa fields examined in central and north central counties surveyed. Non-economic, with 5-85 per 25 sweeps. (Matthew). UTAH - Increased in many parts of State, control necessary in Juab, Millard and Weber Counties. Threatening in many fields. (Knowlton). IDAHO - Abundant in alfalfa fields in Cassia and Minidoka Counties. Often above 100 per sweep. (Gittins, Foote). WYOMING - Light in alfalfa throughout eastern part of State. (Davison). NEVADA - Declining. (Coop. Rpt.). NEW MEXICO - Light to medium on alfalfa in several counties. (N.M. Coop. Rpt.). COLORADO - Averaged 250 per 100 sweeps in alfalfa, Mesa, Delta, Montrose and Garfield Counties, and 4,000 per 100 sweeps in some areas at high elevations. (Exp. Sta.).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - KENTUCKY - Found June 27 in an alfalfa field in Christian County. This is first collection for this county, with 18 taken in 50 sweeps. (Starks). ALABAMA - Light infestation of winged forms on alfalfa in Lee County. (Guyton). KANSAS - Found in about one-half

of alfalfa fields examined in Clay, Saline, McPherson, Rice, Ellsworth and Lincoln Counties. Non-economic, with 8-35 per 25 sweeps. Few winged forms found in northern Lincoln County. (Matthew). Ranged to highs of 100 per sweep in several alfalfa fields in Reno County south of Hutchinson. (Martinez). OKLAHOMA - Light in north central and central alfalfa fields, 0-40 per 10 sweeps typical. Considerably higher in isolated fields in Alfalfa County. (Coppock). TEXAS - Very light on alfalfa in Brazos, Burleson and Robertson Counties. (Randolph). UTAH - More common in counties as far north as Delta, Millard County. Natural enemies generally abundant in alfalfa fields. (Knowlton). NEVADA - One and two per 10 sweeps in irrigated alfalfa in Churchill County. Appearing in Pershing County. (Bechtel, Aug. 1). COLORADO - Infestation expanded from Liberty to Fruita, Mesa County, averaged 20 per 100 sweeps. (Exp. Sta.). NEW MEXICO - Light but increased in northern one-third of State. Heavy in Valencia and Socorro Counties. Generally light in southern half of State, with heavy, spotty infestations. (N. M. Coop. Rpt.).

LYGUS BUGS (*Lygus* spp.) - MASSACHUSETTS - *L. lineolaris* about normal, 20-40 per 100 sweeps in all western counties. (Lavigne, Shaw, July 31). SOUTH DAKOTA - Adults average 5 per 10 sweeps on alfalfa in east central area, 14 per 10 sweeps in southeast. (Hantsbarger, Klix). IDAHO - Abundant in most south central and eastern alfalfa fields. General haying in these areas has contributed to large increase of adults in seed fields. Nymphal numbers high also. Often reached 20 per sweep in Burley and Rupert areas, with approximately a 50-50 adult-nymph ratio. *L. hesperus* most common species. (Gittins, Foote). UTAH - Caused heavy stripping of seed alfalfa, Tooele County. *L. elisus* and *L. hesperus* required control on seed alfalfa throughout State. Populations high. (Knowlton). NEVADA - Moderate to heavy on alfalfa August 1, heavier than last year. (Coop. Rpt.). COLORADO - *L. elisus* and *L. hesperus* averaged 200-300 per 100 sweeps in Mesa, Delta, Montrose and Garfield Counties. (Exp. Sta.). NEW MEXICO - *L. elisus* heavy in most alfalfa fields, Colfax, Quay and Torrance Counties. Damaged seed alfalfa in Tucumcari area. (N. M. Coop. Rpt.).

MEADOW SPITTLEBUG (*Philaenus leucophthalmus*) - WISCONSIN - Adult numbers high in many alfalfa fields. (Wis. Coop. Sur.).

PLANT BUGS - WISCONSIN - *Adelphocoris lineolatus* adult numbers high in many alfalfa fields. (Wis. Coop. Sur.).

CLOVER LEAFHOPPER (*Aceratagallia sanguinolenta*) - SOUTH DAKOTA - Nine adults per 10 sweeps on alfalfa in east central area, 14 per 10 sweeps in southeast. (Hantsbarger, Klix).

POTATO LEAFHOPPER (*Empoasca fabae*) - MASSACHUSETTS - Exceptionally light on second-cutting alfalfa. Averaged 2-18 per 100 sweeps in Hampshire County, 0-30 in Berkshire County and 1-8 in Worcester County. (Lavigne, Shaw, July 31). DELAWARE - Prevalent in red clover and alfalfa in New Castle County. (MacCreary, Conrad). VIRGINIA - Severe on alfalfa in some Albermarle County fields, especially where parts of fields were cut 7-10 days early (Scott), nymphs caused damage to Stafford County alfalfa field (Beck). Damage more general to peanuts in southeastern counties. Averaged 3-4 per sweep. (Clark, Boush). Survey showed medium numbers in each of 3 fields of peanuts in Nansemond, Southampton and Greensville Counties. Some fields recently treated for leafhopper control. (Morris). WISCONSIN - Some yellowing of alfalfa. Averaged 8 per sweep in Outagamie County. Caused some damage to Dane County alfalfa. (Wis. Coop. Sur.).

THREE-CORNERED ALFALFA HOPPER (*Spissistilus festinus*) - LOUISIANA - Heavy in alfalfa, Caddo and Bossier Parishes. (Spink). NEW MEXICO - Light in Mora County alfalfa. (N. M. Coop. Rpt.).

RED-NECKED PEANUTWORM (*Stegasta basqueella*) - GEORGIA - Moderate to heavy on peanuts in Cook, Colquitt, Grady, Seminole, Miller and Terrell Counties. (Johnson). OKLAHOMA - Generally 2-4 percent of terminals infested in several fields checked in Caddo County. (Flora).

AN ACROLOPHID (Acrolophus sp.) - NORTH CAROLINA - Larvae damaged lawn grasses locally in Wayne County. (Wray, Capps).

A CHINCH BUG (Blissus sp.) - GEORGIA - Heavy in St. Augustine grass in Terrell County. (Johnson).

SAGEBRUSH DEFOLIATOR (Aroga websteri) - UTAH - Larvae severely damaged big sage in parts of Ft. Duchesne in the Roosevelt area. (Knowlton).

WESTERN HARVESTER ANT (Pogonomyrmex occidentalis) - NEW MEXICO - Damaged rangeland in San Miguel, Union, Harding and Colfax Counties. (N. M. Coop. Rpt.).

WHITE GRUBS (Phyllophaga spp.) - NORTH DAKOTA - Injured grass sod lawns at several eastern locations. (N. D. Ins. Rpt.).

FRUIT INSECTS

APPLE MAGGOT (*Rhagoletis pomonella*) - MASSACHUSETTS - In many orchards in Amherst area. Oviposition underway. (Crop Pest Cont. Mess.). MINNESOTA - Fly activity still high in all areas. (Minn. Ins. Rpt.).

MITES - DELAWARE - *Tetranychus schoenei* populations building up on apple trees in southern Sussex County. (Kelsey). INDIANA - Mites in several orchards in Vincennes are still high enough to warrant control. Both *Panonychus ulmi* and *T. telarius* present but frequency of heavy *T. telarius* populations increasing. (Hamilton). Considerable damage by *P. ulmi* in many apple plantings in Orleans area. (Marshall). NEW MEXICO - *Bryobia praetiosa* complex and *Tetranychus mcdanieli* browning foliage of apple trees in Bernalillo, Sandoval, Santa Fe and Rio Arriba Counties. Many *T. mcdanieli* infestations extremely heavy and in some orchards over-wintering forms present. (N. M. Coop. Rpt.). UTAH - Fruit mites commonly discoloring apple and sometimes pear foliage in 5 counties. (Knowlton). OREGON - Some severe infestations of *Vasates fockeui* on young prune trees in Willamette Valley and on nursery stock in Portland area. (Every, Capizzi).

CODLING MOTH (*Carpocapsa pomonella*) - INDIANA - Early third-brood larvae expected to enter apples in Vincennes area about August 12. Injury in commercial orchards extremely light. (Hamilton). MINNESOTA - Entrance holes on apples in Twin City area. (Minn. Ins. Rpt.).

FALL WEBWORM (*Hyphantria cunea*) - NEW MEXICO - Damaging apple and pear trees in Rio Arriba County. (N. M. Coop. Rpt.). ALABAMA - Continues on persimmon and pecans over State. (Grimes).

GRASSHOPPERS - NEW MEXICO - Damaging apple foliage in Sandoval, Valencia and Bernalillo Counties. (N. M. Coop. Rpt.).

TWO-SPOTTED SPIDER MITE (*Tetranychus telarius*) - OREGON - Built up to economic numbers in some Washington County gooseberry fields. (Rosenstiel). COLORADO - Building up in cover crops and in some areas high populations on apple trees in Montrose, Delta, Mesa and Garfield Counties. (Exp. Sta., Ext. Ser.). IDAHO - Small fruits severely damaged in Franklin County. (Gittins, Foote).

ORIENTAL FRUIT MOTH (*Grapholitha molesta*) - GEORGIA - Much more abundant than usual this time of year Fort Valley area. Unusually late peach harvest contributed to buildup in late peaches. (Snapp, July 31). INDIANA - Light in most peach orchards in Vincennes area. (Hamilton).

PEACH TWIG BORER (*Anarsia lineatella*) - CALIFORNIA - Locally heavy on almond in Yolo, Yolo County and medium on plum in Chula Vista area of San Diego County. (Cal. Coop. Rpt.).

PEAR-SLUG (*Caliroa cerasi*) - NEW MEXICO - Damaging cherry and choke cherry foliage in Mora County. (N. M. Coop. Rpt.). IDAHO - Severely injuring foliage of pear and cherry in several localities in Bingham County. (Bishop).

LEAF MINERS - CALIFORNIA - A species, tentatively identified as *Nepticula juglandifoliella*, causing serious injury to walnut trees near King City, Monterey County. An estimated 100 acres of a 600-planting infested. (Michelbacher).

A GRAPE LEAFHOPPER (*Erythroneura* sp.) - NEW MEXICO - Very heavy infestations on untreated vines throughout State. (N. M. Coop. Rpt.).

TRUCK CROP INSECTS

BEET LEAFHOPPER (*Circulifer tenellus*) - IDAHO - Abundant in beet fields in Franklin, Minidoka and Cassia Counties. Incidence of curly top in these fields running from 1-5 percent. Tomatoes in gardens in Franklin County seriously injured with many plants lost to curly top. (Foote, Gittins). The overall average for Rupert, Burley, Twin Falls and Jerome areas is 6.6 percent per field with the Twin Falls area showing highest incidence of curly top. Some bean fields in area plowed up because of curly top. (T. F. F. S.). UTAH - Still conspicuous and abundant generally on favored host plants. Little increase in curly top loss on tomatoes since early July. (Dorst, Knowlton). COLORADO - In Montrose, Delta, Garfield, Mesa and Routt Counties, incidence of curly top estimated to be: sugar beets 50-60 percent, tomatoes 50-80 percent, beans 20-30 percent and spinach 100 percent. Insect in Routt County averaged 1-3 per lettuce plant. (Exp. Sta., Ext. Ser., July 29).

BEET WEBWORM (*Loxostege sticticalis*) - IDAHO - Rather high numbers of adults in light traps in Twin Falls but no heavy larval infestations in beet fields to August 8. (T. F. F. S.). Practically no larvae found in eastern and east central areas. Lambsquarter and Russian thistle near beet fields show very little damage from feeding. (Gittins, Foote).

MEXICAN BEAN BEETLE (*Epilachna varivestis*) - NEW MEXICO - Severe damage to beans in Mora County, light to heavy on beans in Torrance County. (N. M. Coop. Rpt.). WYOMING - Light damage continues in southeastern area. (Davison). ALABAMA - Heavy on lima beans in Chilton County. (Blake). DELAWARE - Decreased generally on lima beans over State but still common to prevalent in some fields in Sussex County. (MacCreary, Conrad). MASSACHUSETTS - Larvae about full grown, infestations spotty and generally light, eastern area. (Witcomb, Garland, Aug. 1).

MARGINED BLISTER BEETLE (*Epicauta pestifera*) - DELAWARE - Common on lima beans in central Sussex County. (MacCreary, Conrad).

TWO-SPOTTED SPIDER MITE (*Tetranychus telarius*) - WASHINGTON - All stages heavy on beans at Moses Lake. Beans at Quincy lightly infested. (Landis). IDAHO - Severe injury to garden strawberries in Bingham County, several light infestations on potatoes in Bonneville County. (Bishop). Infestations on wide variety of plants in most parts of eastern area. (Gittins, Foote).

POTATO PSYLLID (*Paratrioza cockerelli*) - WYOMING - Infestation remains unchanged from August 2 report in southeast area. No psyllids observed in east central and northeastern areas on matrimonyvine or potatoes. (Davison). NEW MEXICO - Heavy and severely damaging potatoes and tomatoes in San Juan County. (N. M. Coop. Rpt.).

COLORADO POTATO BEETLE (*Leptinotarsa decemlineata*) - DELAWARE - Damaging tomatoes in several areas of State. (MacCreary, Conrad). WASHINGTON - Large areas of potatoes completely defoliated in Columbia Basin. Control not applied. (Landis). IDAHO - Very common in almost all south central areas wherever adequate controls not applied. Generally the infestation this year is higher than in many previous years, but damage not too extensive. (Gittins, Foote). Populations decreasing in fields of upper Snake River Valley. (Bishop).

POTATO FLEA BEETLE (*Epitrix cucumeris*) - DELAWARE - Prevalent on potatoes in New Castle County. (MacCreary, Conrad). MAINE - Trace numbers of summer generation adults in experimental plantings of potatoes on Aroostook Farm or in commercial plantings in central and southern Aroostook County. (Shands).

A LEAFHOPPER (*Empoasca filamenta*) - WASHINGTON - Infestation heaviest for several years in Kittitas County on potato foliage. (Landis). IDAHO - Very numerous in potato fields in Bingham and Bonneville Counties. (Bishop).

GREEN PEACH APHID (*Myzus persicae*) - DELAWARE - Common on peppers. (MacCreary, Conrad). MAINE - Generally present in fields of central, southeastern and southern Aroostook County potatoes. (Shands). UTAH - Conspicuously infesting peppers at Nephi. (Knowlton). IDAHO - Average about one per 7 leaves in potato fields in vicinity of Idaho Falls. (Bishop).

HARLEQUIN BUG (*Murgantia histrionica*) - ALABAMA - Moderate on collards in Chilton County. (Blake). COLORADO - Spotted infestations on cabbage on July 15 in Wellington area, Larimer County, as high as 50 per plant, causing severe damage. Control applied. Plants with 2-3 egg masses. (Exp. Sta., July 29).

IMPORTED CABBAGEWORM (*Pieris rapae*) - IDAHO - Larvae very common in commercial cabbage in Franklin County. In fields checked nearly all developing heads showed severe larval damage. (Gittins, Foote). RHODE ISLAND - Adults ovipositing on cabbage in Narragansett area. (Hansen). VIRGINIA - Severe on cole crops on Eastern Shore. (Hofmaster).

DIAMONDBACK MOTH (*Plutella maculipennis*) - DELAWARE - Larvae common on cole crops in Kent and New Castle Counties. (MacCreary, Conrad). VIRGINIA - Severe on cole crops on Eastern Shore. Control inefficient. (Hofmaster).

CABBAGE LOOPER (*Trichoplusia ni*) - MARYLAND - Heavy in broccoli and other crucifers. (U. Md., Ent. Dept.). NEW MEXICO - Light to medium on garden tomatoes in Dona Ana County. (N. M. Coop. Rpt.). VIRGINIA - Severe on cole crops on Eastern Shore. Control unsatisfactory. (Hofmaster). RHODE ISLAND - Common on cabbage in Narragansett area. (Hansen).

PICKLEWORMS (*Diaphania* spp.) - ALABAMA - *D. nitidalis* and *D. hyalinata* caused considerable damage to cantaloup in Lee County. (Ruffin).

SPOTTED CUCUMBER BEETLE (*Diabrotica undecimpunctata howardi*) - VIRGINIA - Has spread cucumber wilt to cucumber crops on Eastern Shore and damage heavy in some cases. (Hofmaster).

APHIDS - TEXAS - Heavy on cucumbers in Hale County. (Hawkins). COLORADO - *Macrosiphum solanifolii* and *Myzus persicae* adults and nymphs increasing on potatoes in Weld and Garfield Counties, 20 winged adults per 100 sweeps and average of 6 per 20 leaves. (Exp. Sta, July 29). MARYLAND - Generally heavy on peppers in Worcester County. (U. Md., Ent. Dept.). RHODE ISLAND - *Brevicoryne brassicae* moderate on cabbage in Narragansett. (Hansen).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - DELAWARE - Heavy in peppers. (MacCreary, Conrad).

ASPARAGUS BEETLES (*Crioceris* spp.) - DELAWARE - *C. asparagi* adults and larvae common and adults of *C. duodecimpunctata* common on asparagus ferns over State. (MacCreary, Conrad).

ORANGE TORTRIX (*Argyrotaenia citrana*) - OREGON - Troublesome in some Marion County blackberry plantings. (Stephenson).

EUROPEAN EARWIG (*Forficula auricularia*) - WASHINGTON - Worst epidemic in Pullman area since 1955. Cutting silks of corn; defoliating vegetable crops such as beans, Swiss chard, lettuce and radishes; defoliating young fruit trees; feeding on garden flowers and nuisance in households. (Johansen).

SIX-SPOTTED LEAFHOPPER (*Macrosteles fascifrons*) - WISCONSIN - Populations low in Kenosha County but 10 times as numerous in Rhinelander area. Yellows occur in 75 percent of untreated lettuce in Madison. (Wis. Coop. Sur.).

TOBACCO INSECTS

APHIDS - MARYLAND - Increased on tobacco, but damage not severe. (U. Md., Ent. Dept.). VIRGINIA - Very light in 3 fields surveyed in Greensville County. (Morris). FLORIDA - *Myzus persicae* remained potential threat to shade tobacco. Experimental plots rendered completely worthless by aphid injury. (Fla. Coop. Sur.).

BUDWORMS (*Heliothis* spp.) - FLORIDA - Appeared shortly after transplanting. Very few eggs observed until May 16. Population increased until last harvest of leaves was made. Damage overshadowed all other insect damage in 1958. Infestation greatest since 1956. (Fla. Coop. Sur.). VIRGINIA - Averaged one per 25 plants in one of 3 fields surveyed in Greensville County. (Morris).

CABBAGE LOOPER (*Trichoplusia ni*) - FLORIDA - Appeared in shade tobacco 3-5 days after transplanting, remained throughout season. Reached peak about June 9, decreased gradually thereafter. Damage slightly greater than in 1957, possibly due to lateness of crop. (Fla. Coop. Sur.).

FLEA BEETLES - MARYLAND - Abundant in most tobacco fields. (U. Md., Ent. Dept.). VIRGINIA - *Epitrix hirtipennis* light to numerous on tobacco in Pittsylvania County (Dominick) and averaged 3.5, 3 and 1 per leaf on tobacco plants in 3 Greensville County fields (Morris).

HORNWORMS (*Protoparce* spp.) - MARYLAND - Damage to tobacco generally light. (U. Md., Ent. Dept.). VIRGINIA - First, second and third-instar larvae generally light in Pittsylvania County. (Dominick). One larva per 25 plants found in one field, of 3 surveyed in Greensville County. (Morris). FLORIDA - Appeared in shade tobacco approximately one month after planting. Infestation smallest since 1955. First brood caused very little damage. Tobacco was almost harvested before second brood could cause much damage. (Fla. Coop. Sur.).

COTTON INSECTS

BOLL WEEVIL (*Anthonomus grandis*) - NORTH CAROLINA - Increasing fast south central area. (Mistic). Spotty heavy infestations in southeastern area. (Cott. News Lett.). SOUTH CAROLINA - Infestations highest of season. Punctures as high as 70-90 percent in untreated fields. (Cott. Lett.). Infestations rose rapidly in Florence area. Punctured nearly all remaining squares some fields. Insecticides being applied generally. (Fye et al.). GEORGIA - Percent punctured squares ranged from 15-85 in few fields in southern and central areas. Weevils abundant in squares and young bolls in all fields. (Johnson). ALABAMA - Infestations should be treated at four-day intervals in southern area. Many small bolls damaged some areas. Infestations beginning to increase in northern area. (Grimes). Activity increasing in central area. (Rawson). MISSISSIPPI - Light hatch in delta counties. Populations remain extremely low. (Merkel et al.). TENNESSEE - Percent infestation averaged 17 percent in western counties compared to 30 percent at same time in 1957. Heaviest populations in older fields. Migration to younger cotton underway locally. Infestations can become serious if rains commence. (Locke). LOUISIANA - Percent infestation averaged 5 in East Carroll Parish and from 2-40 in 9 fields in Tensas Parish. Infestations light to medium in Richland, Ouachita, Caldwell and Franklin Parishes. (Spink). Square infestation averaged 9 percent in 152 fields checked in Madison Parish; ranging from 1-42 percent. Some migration occurred locally in Madison Parish. (Smith et al.).

ARKANSAS - General emergence of second-generation weevils taking place, especially in early planted cotton. Week of August 10 appears to be critical week of weevil control. (Ark. Ins. Rpt.). MISSOURI - Square damage ranged from 1-27 percent in 68 of 573 fields inspected in Dunklin, Butler, Ripley and Stoddard Counties. (Kyd, Thomas). OKLAHOMA - Infestations generally very light in south central and southwestern areas; square counts in Grady County 2-3 percent, 1-2 percent in Cotton County, less than one percent in isolated fields in Tillman County. (Flora). TEXAS - Infestations scarce in dryland fields in McLennan and Falls Counties; under control in irrigated fields. (Parenacia et al.). VIRGINIA - Punctured 1-28 percent of squares in fields in Nansemond, Southampton, and Greensville Counties. (Morris).

BOLLWORMS (*Heliothis* spp. et al.) - VIRGINIA - Present on cotton in Nansemond and Southampton Counties. (Morris). NORTH CAROLINA - Considerable moth activity and oviposition on cotton. Control satisfactory to August 8. (Mistic). Not serious generally. (Cott. News Lett.). SOUTH CAROLINA - Making another appearance in cotton fields. (Cott. Lett.). Remain a very great threat to young bolls in Florence area. Many heavy infestations reported. Parasites and predators do not appear in large numbers. (Fye et al.). GEORGIA - Egg counts averaged 25 per 100 terminals and larval counts averaged 5 per 100 terminals. (Johnson). ALABAMA - Infestations decreased some areas. (Grimes). Egg-laying continues on cotton in northern area. (Eden). MISSISSIPPI - Heavy egg deposition and hatch occurred in delta counties. Treatment general in area. (Merkl et al.). TENNESSEE - Average infestation 7 percent in western counties. Heaviest infestations in poorly treated fields. If weather conditions continue, bollworms will probably cause more damage over State than boll weevil. (Locke).

LOUISIANA - Average infestation 7 percent in East Carroll Parish. Light infestations in Richland Parish, medium to heavy infestations in Ouachita Parish and heavy infestations in Caldwell Parish. Several fields in Franklin Parish ranged from 2-8 larvae and 3-10 eggs per 100 terminals. (Spink). Square infestations became rather heavy with some boll damage in Madison Parish. Average infestation was 10 percent in infested fields. (Smith et al.). ARKANSAS - Moths continue active. Egg deposition down some areas. (Ark. Ins. Rpt.). MISSOURI - Infestations ranged from 1-6 eggs and 1-12 larvae per 100 terminals in 418 of 573 fields inspected. Few previously treated fields now require control. (Kyd, Thomas). OKLAHOMA - Populations averaged 4 percent infested bolls in Grady County; 12 percent in Caddo County; 8 percent in Cotton County; 15 percent in Tillman County. However, isolated fields have much higher percentages than those given. (Flora). TEXAS - Egg deposition continues in irrigated fields in McLennan and Falls Counties. Eggs averaged about 40 and larvae 2-3 per 100 terminals. Square and boll injury light; control good. (Parenacia et al.). NEW MEXICO - Medium to heavy, spotty infestations in Deming area, 8 fields checked averaged 20-40 larvae per 100 terminals; generally light in Dona Ana and light to medium in Eddy County, spotty throughout Chaves County. (N. M. Coop. Rpt.). ARIZONA - Heavy infestations some Pima County fields. General but lighter infestations in Maricopa and Pinal Counties. (Bottger, Kauffman, Sheets). CALIFORNIA - Counts generally low in Madera, Tulare, Fresno and Imperial Counties. Infestations being checked by predators most of Fresno County but quite plentiful along Sierra foothills. (Cott. Lett.).

APHIDS - VIRGINIA - Generally light in Greensville and Southampton Counties. Heavy in spots of treated field in Southampton County. (Morris). SOUTH CAROLINA - Present most counties but no serious infestation reported in fields other than mature ones. (Cott. Lett.). Continue to buildup in Florence area, but not in economic numbers. (Fye et al.). GEORGIA - Light medium infestations of *Aphis gossypii* in 10 counties; heavy in Berrien County. (Johnson). ALABAMA - Heavy infestations of *A. gossypii* on cotton in southwestern area. (Ruffin, Grimes). MISSISSIPPI - Infestations general in untreated fields

over delta counties. Light damage apparent. (Merkl et al.). LOUISIANA - Light infestations in Ouachita, Richland, St. Landry, Evangeline and Caldwell Parishes. (Spink). Counts made in 13 infested fields in Madison Parish averaged .75 per square inch. (Smith et al.). ARKANSAS - Populations increasing some fields where regular control program begun. (Ark. Ins. Rpt.). NEW MEXICO - Heavy spot infestations of *A. gossypii* in many fields and general but light in others near Deming, Luna County; generally light with heavy spot infestations in Dona Ana, Eddy, Chaves, Socorro, Lea and Otero Counties. (N. M. Coop. Rpt.).

SPIDER MITES - NORTH CAROLINA - Appearing in isolated areas. (Cott. News Lett.). SOUTH CAROLINA - Most general infestations in Coastal Plain Counties. (Cott. Lett.). Scattered spotty infestations in Florence area; no major outbreak evident. May be potential defoliators of rank cotton in area. (Fye et al.). GEORGIA - Light to moderate infestations in 11 counties. (Johnson). ALABAMA - Continue to damage cotton several areas of State. Severe infestations in Randolph County. Infestations rather general in northern area where treatments not used. (Grimes, Eden). MISSISSIPPI - Light to medium infestation general over delta counties. (Merkl et al.). TENNESSEE - *Tetranychus telarius* causing heavy scattered damage over western area cotton. Conditions for further buildup ideal. (Locke). LOUISIANA - Light infestations in Ouachita, Richland, St. Landry, Evangeline and Caldwell Parishes. (Spink). Numerous spotted infestations generally found following use of DDT combination insecticides in Madison Parish. (Smith et al.). ARKANSAS - Continue to increase in several areas, especially in northeast. (Ark. Ins. Rpt.). MISSOURI - Infestations ranging from marginal to spot defoliation found in 291 of 573 fields examined. (Kyd, Thomas). TEXAS - Light to medium infestations noted in few fields in McLennan and Falls Counties. (Parencia et al.). ARIZONA - Few outbreaks at Queen Creek and Goodyear areas in Maricopa County. (Bottger, Kauffman, Sheets). CALIFORNIA - Spreading rapidly and causing some damage in Madera County. Nearly all untreated fields in Fresno County infested. Many fields require control. Becoming quite widespread in San Joaquin County; severe infestations around Burrell, Fresno County. (Cott. Lett.).

LOOPERS - GEORGIA - Light infestations of *Trichoplusia ni* on cotton in Berrien, Lowndes, Cook, Grady, Miller and Sumter Counties. (Johnson). ALABAMA - Heavy infestations of *T. ni* on cotton in Butler County. (Arant). OKLAHOMA - Light, general populations showing up in southern fields; heavy in a few isolated fields. (Flora). ARIZONA - Leaf ragging as high as 60-80 percent in Pinal County. Virus disease prevalent but small loopers abundant. (Bottger, Kauffman, Sheets).

FALL WEBWORM (*Hyphantria cunea*) - ALABAMA - Moderate infestation on cotton in Limestone County. (Arant).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - ALABAMA - Additional infestations, boring into upper portion of cotton stalks, northern area. (Eden).

PLANT BUGS - MISSISSIPPI - Populations relatively spotty in delta counties, ranging from light to heavy. Damage still showing up in some older fields. (Merkl et al.). TENNESSEE - Heavy many fields in western area. (Locke). NEW MEXICO - Populations of *Lygus* spp. continue high in Pima and Maricopa Counties. (Bottger, Kauffman, Sheets).

LEAF ROLLERS - ARIZONA - Few infestations in Peoria and Tolleson areas of Maricopa County. Destructive populations in several fields in Pinal County. (Bottger, Kauffman, Sheets).

STINK BUGS (*Chlorochroa ligata* and *Acrosternum hilare*) - NEW MEXICO - Damaging cotton in Quay County. (N. M. Coop. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SAWFLIES - **DELAWARE** - *Nematus ventralis* almost completely defoliated willow in an area of Sussex County. (MacCreary, Conrad). **WISCONSIN** - Generally heavy populations of *Pristiphora erichsonii* in northwest area but not as heavy as in 1957. Some pupation. (Wis. Coop. Sur.). **MINNESOTA** - *Pikonema alaskensis* caused considerable defoliation on a roadside planting of spruce trees, St. Louis County. (Minn. Ins. Rpt.).

Sawfly Situation in Northeast - A sawfly caused medium defoliation of 5 acres of pitch pine in Ulster County, NEW YORK. In St. Marys County, MARYLAND, a sawfly, probably *Neodiprion taedae*, in large numbers on young loblolly pines. *Pleuroneura borealis* generally present in northern NEW HAMPSHIRE and MAINE. Abundant and injury to fir in eastern Maine of serious concern to Christmas tree operators. *N. lecontei* attacking red pine in many areas of Saratoga, Lewis and St. Lawrence Counties, NEW YORK. Severe defoliation occurred in a 20-acre planting in Saratoga County that was treated in 1957. Present control appears unsatisfactory in other plantations. (Northeast. For. Pest Rptr., Aug. 10).

WHITE-PINE WEEVIL (*Pissodes strobi*) - **NEW JERSEY** - Extensive injury to white pine and spruce leaders in northwest counties. (Ins. Dis. Newsl.). **WISCONSIN** - Infestations heavy in northwestern counties especially in Jack-pine plantations. (Wis. Coop. Sur.).

SPRUCE BUDWORM (*Choristoneura fumiferana*) - **NEW MEXICO** - Infestations moderate to heavy in northwestern area. (N. M. Coop. Rpt.). **MAINE** - No signs of heavy feeding in mid-July in northern area treated in June. Noticeable defoliation light to medium, most severe in vicinity of Portage Lake, just outside treated area. (Northeast. For. Pest Rptr.).

FALL WEBWORM (*Hyphantria cunea*) - **NEW JERSEY** - Tents very abundant in some northern areas of State. (Ins. Dis. Newsl.). **NEW MEXICO** - Heavy defoliation of poplars and elms in Sante Fe and Rio Arriba Counties. (N. M. Coop. Rpt.). **VIRGINIA** - Conspicuous on pecan, sourwood and persimmon trees in Pittsylvania County. (Dominick). **PENNSYLVANIA** - Becoming prominent on a number of trees in the southeast. (Menusan). **MICHIGAN** - Nests common over lower half of the Lower Peninsula. (Hutson).

SADDLED PROMINENT (*Heterocampa guttivitta*) - **NEW HAMPSHIRE** - A serious infestation in its second year causing heavy defoliation of beech on southwestern slopes of Bald Mountain, near Chocorua. (Northeast. For. Pest Rptr., Aug. 10).

EUROPEAN PINE SHOOT MOTH (*Rhyacionia buoliana*) - Continues abundant on red pine throughout northeastern region. Control applied to 68 acres in Garret County, MARYLAND. Adults emerged last week in June in PENNSYLVANIA and northern NEW JERSEY. (Northeast. For. Pest Rptr.).

YELLOW-NECKED CATERPILLAR (*Datana ministra*) - **DELAWARE** - Moderate damage to linden in New Castle County and conspicuous damage to several species of oaks throughout State. (MacCreary, Conrad).

VARIABLE OAK LEAF CATERPILLAR (*Heterocampa manteo*) - **DELAWARE** - Feeding heavily on white oaks, Sussex and Kent Counties. (MacCreary, Conrad). **MARYLAND** - Very heavy on oak in Cecil County along Susquehanna River and in northern part of county. Large acreages defoliated, giving appearance of forest fire damage. (U. Md., Ent. Dept.).

NORWAY-MAPLE APHID (*Periphyllus lyropictus*) - **WASHINGTON** - Heavy damage to Norway maples at Sunnyside. (Landis). **UTAH** - Heavily infesting maples at Tooele. (Knowlton).

APHIDS - MINNESOTA - A pine bark aphid, probably Pineus strobi, infesting young wind-break plantings of Norway pine in Park Rapids and Grand Rapids areas. (Minn. Ins. Rpt.). VERMONT - Chermes piceae generally distributed in fir stands throughout most of State. Northernmost infestation now known, in vicinity of Danville. Tree mortality in many stands. Situation appears increasingly serious. Pineus pinifoliae caused loss of planted white pines and severe injury to surviving trees at Ripton and Lincoln. (Northeast. For. Pest Rpt., Aug. 10).

SCALE INSECTS - DELAWARE - Pseudophillippia quaintancii very common on loblolly pines in central Sussex County. (MacCreary, Conrad). UTAH - Gossyparia spuria complex damaged many elms in Salt Lake County. (Knowlton).

LEAF MINERS - CONNECTICUT - Cameraria hamadryadella heavily infesting oaks in several areas in State, especially New Haven and Windsor. Adults emerging in Windsor area. Det. by J. C. Schread. (Johnson). NORTH CAROLINA - Cameraria sp. mining oak leaves locally in Cumberland County. (Scott, Farrier).

ELM LEAF BEETLE (Galerucella xanthomelaena) - NEVADA - Second-brood adults numerous and oviposition underway in west central area. (Bechtel, et al., Aug. 1). UTAH - Skeletonized a few hundred large elms in Salt Lake County particularly in Holladay and Jordon districts. (Knowlton). VIRGINIA - Outbreaks heavy on elm on Eastern Shore this year. (Hofmaster).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - WISCONSIN - Emergence well underway. Should reach peak about mid-August. As of August 6, 1406 cases of Dutch elm disease found. (Wis. Coop. Sur.). NEW MEXICO - Infesting elm in Albuquerque. (N. M. Coop. Rpt.).

MIMOSA WEBWORM (Homadaula albizziae) - VIRGINIA - Light to medium damage to mimosa trees in vicinity of Chatham in Pittsylvania County. (Dominick). PENNSYLVANIA - Heavy feeding on honeylocust in large area of Mifflin County, July 31. (Jeffery). Heavy feeding on honeylocust late in July in Dauphin, Lancaster and York Counties. (Sleesman).

BAGWORM (Thyridopteryx ephemeraeformis) - KANSAS - Actively feeding on ornamental junipers and shade trees generally throughout eastern half of State. Controls applied some areas. (Gates). NEW JERSEY - Control more difficult. (Ins. Dis. Newsl.). DELAWARE - Heavy damage to sycamores in New Castle and Sussex Counties, and to willows and chokecherry in Sussex County. (MacCreary, Conrad). MARYLAND - Severe damage to trees in central part of State. (U. Md., Ent. Dept.).

ALDER FLEA BEETLE (Altica ambiens) - CALIFORNIA - Defoliating alders in Camp Seeley area, San Bernardino National Forest. (Eaton).

AN AMETHYST CEDAR BORER (Semanotus amethystinus) - CALIFORNIA - Reported working in cedar logs and lumber in mill yard at Sacramento. The fact that the borer was penetrating the wood appears to be a deviation from its normal habit of a bark and cambium feeder. (Eaton).

MITES - NEW JERSEY - Spider mites increasing rapidly in some areas on ornamental fruit trees. (Ins. Dis. Newsl.). MARYLAND - Aceria sp. damaging leaves of beech in Towson area. (U. Md., Ent. Dept.). DELAWARE - Oligonychus bicolor heavy on red oak in Sussex County and moderate on same species in Kent County. (MacCreary, Conrad). MINNESOTA - Spider mites on evergreens, shrubs and perennial flowers. Weather has been favorable for mite buildup. (Minn. Ins. Rpt.).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - NEVADA - *Aedes* sp. and *A. nigromaculis* numerous and annoying in many areas around Fallon, Churchill County. (Bechtel, Chapman, Lauderdale, Aug. 1). NEW MEXICO - *Culex tarsalis* severe nuisance in Dona Ana, Sierra, Socorro, Valencia and Bernalillo Counties. Danger of encephalitis appears to be great. (N. M. Coop. Rpt.). MINNESOTA - In 337 larval collections made in the Twin City area, August 1-7, *Culex tarsalis* was taken 50 times and *Aedes vexans* 148; in 68 biting collections *C. tarsalis* 4 and *A. vexans* 63; in 77 light trap collections *C. tarsalis* 51, *Culiseta inornata* 6 and *A. vexans* 77. (Minn. Ins. Rpt.).

HORN FLY (*Siphona irritans*) - KANSAS - Moderate to heavy on cattle in pastures of central and north central counties. Counts ranged from 300 to over 800 per animal. (Matthew).

A SCREW-WORM (*Callitroga* sp.) - NEW MEXICO - Occasional infestation on cattle in northern area of State. Attacking wounds in dog in Dona Ana County. (N. M. Coop. Rpt.).

TABANIDS - KANSAS - *Tabanus atratus* and *T. sulcifrons* noticeable around cattle herds in central and north central counties. (Matthew). IDAHO - *Chrysops* spp. numerous in localized areas in Teton, Bonneville and Bingham Counties. (Bishop).

SHEEP BOT FLY (*Oestrus ovis*) - IDAHO - Light infestation in a flock of sheep near Preston. Adult flies causing lambs to stay in shady areas and go off feed with a resultant slower rate of weight gain. (Gittins, Foote).

FLEAS - MARYLAND - Cat and dog fleas in several parts of State. (U. Md., Ent. Dept.).

FLIES - UTAH - House flies commonly troublesome in restaurants and grocery stores in several central counties. Horse bot flies annoying horses in parts of 7 counties. (Knowlton).

TICKS - VIRGINIA - Still heavy along roadways and in woods in some southeast areas. (Boush).

STORED-PRODUCT INSECTS

KHAPRA BEETLE (Trogoderma granarium) - Results of all surveys conducted in Eastern Region have been negative. (PPC, East. Reg., June Rpt.).

LARDER BEETLE (Dermestes lardarius) - PENNSYLVANIA - Heavy on sugar-cured hams in Fulton County. (Udine).

BENEFICIAL INSECTS

PARASITES AND PREDATORS - NEW MEXICO - Nabis ferus numerous in most alfalfa fields checked, with Scaeva pyraustri larvae abundant in those fields infested with pea aphids. Hippodamia convergens very abundant in corn and sorghum infested with aphids. Praon sp. parasitizing cotton aphids in most cotton fields in Dona Ana County, with 75 percent of aphids on some leaves affected. (N. M. Coop. Rpt.). UTAH - Damsel bugs, lady beetles, big-eyed bugs, chrysopids and minute pirate bugs extremely numerous in some Millard, Tooele and Salt Lake County alfalfa fields. (Knowlton).

MISCELLANEOUS INSECTS

ASIATIC GARDEN BEETLE (Autoserica castanea) - RHODE ISLAND - Heavy adult flight attracted to lights at Narragansett, August 6. (Boaro).

JAPANESE BEETLE (Popillia japonica) - MASSACHUSETTS - Now most numerous for this season, but much below normal. (Whitcomb, Garland, Aug. 1). NORTH CAROLINA - Present in Cherokee County for first time. (PPC). WISCONSIN - No beetles trapped to date in 610 traps operated in 47 locations in 9 southeastern counties. (Wis. Coop. Sur.). First adults in VIRGINIA observed June 6 in Norfolk County. Moderate numbers in Charles County by June 12 and at higher elevations in Washington County. Adults observed in WEST VIRGINIA June 17. No adults observed in PENNSYLVANIA. Two adults found in Poughkeepsie, NEW YORK, June 19. None observed in New England during June. (PPC, East. Reg., June Rpt.). PENNSYLVANIA - Favored plants one half defoliated in Westmoreland and Allegheny Counties. (Jeffery). Light in Dauphin County. Damage heavy in Adams and Franklin Counties. (Sleesman).

SAY STINK BUG (Chlorochroa sayi) - IDAHO - Large numbers attracted to lights in Preston area. Caused considerable nuisance. (Gittins, Foote).

STRAWBERRY ROOT WEEVIL (Brachyrhinus ovatus) - CONNECTICUT - Migrating into many homes generally. (Johnson).

WASPS - NORTH DAKOTA - Vespula spp. troublesome in Fargo area. (N. D. Ins. Rpt.).

A WEEVIL (Calomycterus setarius) - PENNSYLVANIA - Moderate but quite general in homes in the southeastern part of the State. (Menusan).

Numerous males and females of Brachymyrmex heeri var. obscurior Forel were recently sent in for determination with a statement as follows: "Swarmed all over passengers and steps and sides of plane as passengers were boarding plane at Ramey AFB, Puerto Rico, on June 2, 1958 for Charleston, S. C." The plane was aerosoled heavily before the passengers boarded. The door entrance and space going up the steps was aerosoled just before passengers started to enter. A second spray was given after they were aboard. These observations were made between 5 and 6 P.M. when the temperature was in the eighties and the weather cloudy, followed by showers. Other observations showed that "there were showers nearly every afternoon in June, and about the time the

showers started the swarming ants would appear, getting all over cars and people". The Insect Identification and Parasite Introduction Laboratories report that obscurior is a common ant in Puerto Rico and other West Indian islands but is not so commonly observed as are the larger and more active kinds of ants. The species is a notorious attendant on honeydew excreting insects, especially subterranean forms. H. K. Plank and Marion R. Smith found that in Puerto Rico next to the fire ant, Solenopsis geminata, it is the most common attendant on the pineapple mealybug, Pseudococcus brevipes Ckll. It is thought to not only attend but even disseminate the mealybugs. (Smith et al.).

CORRECTIONS

CEIR 8(30) : 649 - CLOVER APHID - WASHINGTON - Should read 500 per 10 heads.

CEIR 8(32) : 691 - SPOTTED ALFALFA APHID - NEVADA - Include "Populations increasing in several fields in Moapa Valley, Clark County."

ADDITIONAL NOTES

MICHIGAN - ARMYWORM larvae locally abundant about Bronson in fields of alfalfa-bromegrass. EUROPEAN RED MITE problem on plums. CODLING MOTH adults of summer brood appeared at Hart, Beulah and Traverse City August 3. POTATO LEAFHOPPER and SIX-SPOTTED LEAFHOPPER increased four fold week of July 27 at East Lansing, Sodus and Bath. (Hutson).

NEW YORK - EUROPEAN RED MITE and TWO-SPOTTED SPIDER MITE increased in Rockland County with some foliage injury. Built up sharply in many prune and apple orchards in Niagara County, growers applied control. ORIENTAL FRUIT MOTH appeared in light traps in Rockland County. Second-brood RED-BANDED LEAF ROLLER found July 29 near Gasport, which is about 12 days later than in 1957, in Niagara County. Control begun. Hatching rapidly in Wayne County. Controls begun. EUROPEAN CORN BORER egg masses and first and second-instar larvae in moderate numbers in one location in Hudson Valley. ARMYWORM and FALL ARMYWORM caused some damage near Stone Ridge. APHIDS continue to feed around silks and tassels in Nassau County. JAPANESE BEETLE more serious in Nassau County than for past four years. (N. Y. Wkly. Rpt.).

NORTH CAROLINA - TOBACCO FLEA BEETLE increased on tobacco in Granville area, but is generally light. Little economic damage. (Chamberlin) TOBACCO HORWORM increased on tobacco in Forsyth, Yadkin and Surry Counties. Larvae mostly early instars. (Scott). Increased in Granville County, but generally light with little economic damage. (Chamberlin). Oviposition occurred along a line through Edgecombe, Wake and Moore Counties. Heavy infestations in green tobacco along this line, but most have been arrested. (Farrier). GRASSHOPPERS caused some injury to burley tobacco in Haywood County. (Jones).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Protoparce sexta	quinq.	Heliothis zea	vires.
ALABAMA									
Crossville 8/3	4						28	116	
ARKANSAS									
Fayetteville 7/24-8/6	44	45		14	102			58	
Hope 7/24-8/6	2							25	
Kelso 7/24-8/6	5	8		2				112	
Morrilton 7/31-8/6	31	25						230	
Osceola 7/24-30								5	
Stuttgart 7/24-8/6	2							14	
FLORIDA									
Monticello 8/5								2	1
Quincy 8/4	8					9		132	21
ILLINOIS									
Urbana 8/1-7	45	23	26	90					
INDIANA(Counties)									
Orange 7/26-8/4	69	3	62	33		13	4	5	
Tiptecanoe 7/30-8/5	147	46	33	135		1		1	
KANSAS									
Garden City 7/25-8/4	48	4	10	14		6	14		
Hays 8/1-4	53	23	10	32					
Manhattan 8/2-8	25	10	33	3		5			
LOUISIANA									
Baton Rouge 8/1-7	3	1	98		195			70	
Shreveport 8/5	13	6	12	3	23			155	
MAINE									
Monmouth 8/3-9	5								
Orono 8/3-9	1								
MISSISSIPPI									
Senatobia 8/1-8	5	4			3			3	
State College 8/2-8	32	14	89	1	257	2		59	1
*Stoneville 8/1-8	2		3	1	23	1		14	
NEBRASKA									
Alliance 7/19-28	967	3		403			4	2	1
Kearney 7/23-29	80	555		45	52	17	1	912	28
Lincoln 7/26-8/1	239	98		93				25	
North Platte 7/25-31	890	20	1	369	7	2	3	2	4
Scotts Bluff 7/29-8/4	81			205			2		
NORTH CAROLINA									
Charleston 8/4-10	10	5	128	4	226	16		349	8
Clayton 8/7	12	16	87			25	2	125	28
Faison 8/7	10	11	58			6	2	201	23
SOUTH CAROLINA									
Clemson 7/2-8	94	36	161			29	8	45	2
Florence 8/3-9	313	139	959	136	643	50	14	14256	550

*Two traps - Stoneville

LIGHT TRAP COLLECTIONS - Continued

	Pseud. Agrot. unip. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Protoparce sexta	quinq.	Heliothis zea vires.
<u>TENNESSEE(Counties)</u>							
Blount 7/29-8/4	24	34	156	8	2	6	18
Cumberland 7/29-8/4	32	5	44	9	11	15	1
Greene 7/29-8/4	53	9	27	9	5	15	4
Johnson 7/29-8/4	306	90	520	46	2	2	10
Madison 7/29-8/4	27	20	22	13	2	3	32
Maury 7/29-8/4	50	4	60	4	4	6	4
Robertson 7/29-8/4	16	24	96	12	16	20	4

VIRGINIA(County)

Pittsylvania 7/27-8/2 66 148

ARMYWORM (*Pseudaletia unipuncta*) - 7/29-8/4: *Arlington - 24; Janesville - 5;
 LaCrosse - 9; Oakfield - 1; Platteville - 27; Ripon - 8; River Falls - 7;
 Rosendale - 7; *Theresa - 28; Waterford - 10.

*Two traps - Arlington; 3 traps - Theresa.

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

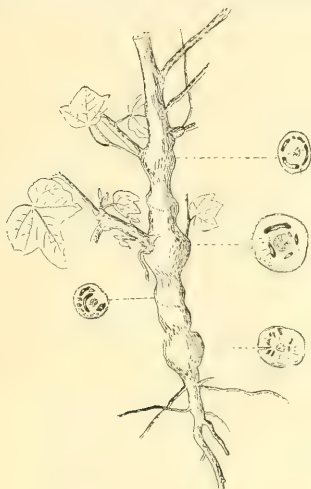
COTTON STEM WEEVIL (Pempherulus affinis (Faust))

Economic Importance: The cotton stem weevil is considered a very important pest of cotton in India, Burma and Thailand, particularly on irrigated cotton.

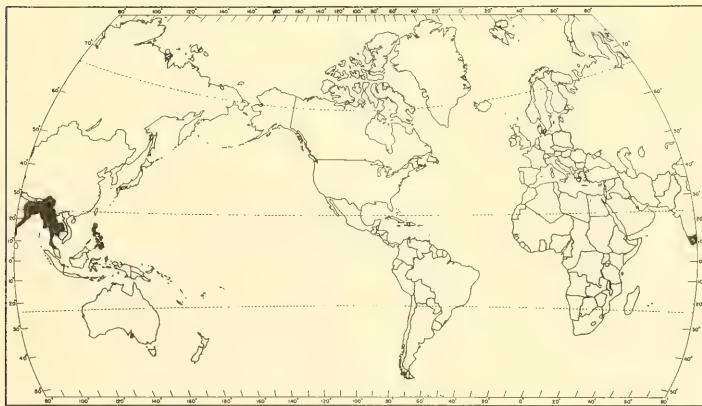
Damage to dryland cotton is usually light. In South India, where climatic conditions are most favorable, from 70 to 100 percent of the cotton in some fields may be attacked. For the 10-year period, 1928 to 1938, the pest was recorded as serious in India. Infested plants become stunted and sometimes succumb if injury is too severe. They easily break down in heavy wind. The major loss in India is to the seedlings, which almost always succumb to attack.

Hosts: Cotton is the major cultivated host, with okra and kenaf hibiscus being very important alternate food plants. In addition, 16 other alternate food plants have been recorded.

Distribution: This insect occurs throughout most of southern and western India, West Pakistan, Burma, Thailand and the Philippine Islands.



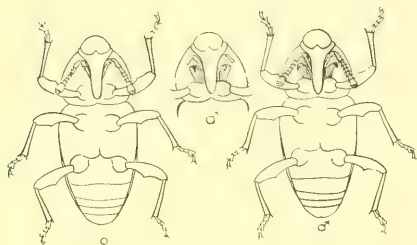
Damage to Cotton



General Distribution of Cotton Stem Weevil

Life History and Habits: Eggs are deposited in slits made by the female in the bark of the main stem, generally around the nodes. The female cements the egg in the cavity which produces a characteristic scar. Hatching occurs in about 10 days and the larvae begin feeding, making tunnels that are irregular, sometimes spiral, between the bark and the main stem. Each female produces about 46 eggs. Larval maturity takes place in 30 to 45 days, varying with humidity and temperature. The optimum humidity for young larvae is 100 percent. Eggs and young larvae are very sensitive to desiccation and require a high degree of moisture. The greatest mortality occurs in these stages. Pupation takes place in the burrow and lasts for about 12 days. The adults emerge from the stems of the host plants over a period of two months. Copulation begins almost immediately after emergence and may take place several times at frequent intervals for a period up to two months with little or no loss of fertility. Total development averages about 57 days. In southern India, as many as 6 generations a year may be produced.

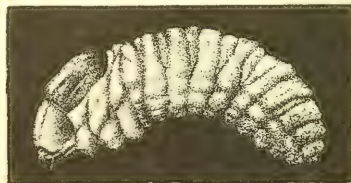
Description: The adults are small; 3 mm. in length. Snout very prominent and comparatively long and pointed, curved down and backwards. Antennae attached to snout apart from proximal region, terminal segments enlarged and darker than others. Prothorax prominent, more or less cylindrical. Elytra rough, with longitudinal striations. Two sharp tubercles on ventral surface of body just in front of anterior coxae are usually present in the males of this species. Color is dark brown, speckled with minute grayish or whitish markings. At the central region of posterior margin of thorax is a small diamond-shaped white mark which continues backwards along inner edges of elytra. Sides of thorax and abdomen pale grayish-white. Upper portions of legs dark brown. Body of larva whitish-yellow, head brown; 5 mm. in length. Pupae uniform, pale white, with tinge of yellow; 4-4.5 mm. in length. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies.) CEIR 8(33) 8-15-58



Female Male
(Ventral Aspects)



Adult



Larva

Figures (except map): Ventral aspect of male and female from Ballard, E. 1923. Dept. Agr. in India Mem. 7(12):243-255. Larva from Krishna Ayyar, P. N. and Margabandhu, V. 1941. Bul. Ent. Res. 32(1):61-82. Adult and damage from Madras Agr. Dept. Year Book 1918. 147 pp. Madras.

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AUGUST 22, 1958

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Ent.

Cooperative
ECONOMIC INSECT
REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GRASSHOPPERS caused considerable damage in central areas of South Dakota. May cause damage to fall-seeded small grains in an area of Oklahoma. Damaged range and crops in several areas of Utah. (p. 735).

EUROPEAN CORN BORER found for first time in Johnston County, North Carolina. (p. 735). Egg mass counts high in Boone County, Iowa. (p. 736). CORN EARWORM threat in Wisconsin. Caused severest damage in 12 years in Yakima Valley, Washington. (p. 736). CORN LEAF APHID heavy in Rhode Island, increased in areas of Maryland, infesting late-planted corn in southern Wisconsin and remained severe in northwestern Ohio. (p. 737).

ORCHARD MITES troublesome in several states. (p. 740).

CABBAGEWORMS damaging some cole crops in Oregon and prevalent on crucifers and other crops in Delaware. The 1958 season may be the worst looper year experienced in eastern Virginia. (p. 741).

Another heavy emergence of BOLLWORM adults may occur in Arkansas. Larvae caused considerable damage over western Tennessee. (p. 743). Activity increased in South Carolina. (p. 744). Light trap catch high at Florence. (p. 749).

SPIDER MITES heavy and damaging in several cotton-producing states. (p. 745).

GYPSY MOTHS trapped in Michigan. (p. 745). WHITE-PINE WEEVIL damaged pines in Virginia and Pennsylvania. (p. 745).

CORRECTIONS. (p. 748). ADDITIONAL NOTES. (p. 750).

INSECTS not known to occur in the United States. (p. 751).

WEATHER BUREAU 30-DAY OUTLOOK
MID-AUGUST TO MID-SEPTEMBER 1958

The Weather Bureau's 30-day outlook for the period from mid-August to mid-September calls for temperatures to average below seasonal normals in the northeastern quarter of the nation. Above normal averages are expected in the western half of the country and also in the South Atlantic States. In regions not specified near normal temperatures are indicated. Rainfall is predicted to exceed normal in the Ohio Valley and in the North and Middle Atlantic States. Subnormal amounts are expected in the northwestern quarter of the nation and also in the Southern Plains and Upper Mississippi Valley. Elsewhere rainfall amounts should not depart greatly from seasonal normals.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 a half year.

WEATHER OF THE WEEK ENDING AUGUST 18

Weather events of this week were not particularly spectacular. Some of the more outstanding situations comprising the general picture were the hot, dry conditions of the Northwest further developing range and forest-fire hazards, the moderate to heavy showers occurring somewhat locally in southern California, northern Arizona, and northwestern New Mexico and the heavy weekly precipitation ranging up to 2-4 inches in parts of Kansas, adjacent States and eastward into the Ohio and Tennessee Valleys and thence northward into Pennsylvania. Along the East Coast, residents awaited reports on the development of tropical storm Becky and hurricane Cleo which did not reach land areas. Like last week, temperatures averaged near to above normal over most of the county, with greatest anomalies being observed in the northern Great Plains and Southwest. Daily maxima reached or exceeded 100° on several days in eastern Montana and parts of the Dakotas, where departures for the week were +6° to +9°. Similar temperature conditions prevailed in sections of the southern Great Plains and desert areas of the Southwest, but departures there generally did not exceed +6°. In the extreme North, from the Great Lakes region eastward, weekly temperatures averaged a few degrees below the seasonal normals. Cooler conditions prevailed over most of the northeastern quarter of the Nation after the weekend, when a Canadian air mass pushed in over this area.

Weekly precipitation totals for the most part were light in the Northern Border States and from the Continental Divide westward. Little or none was received in parts of southern Washington, western Oregon and extreme northern California. From the Gulf coast northward into southern Nebraska, most of Iowa, the southern Great Lakes region, Pennsylvania and southeastern New York moderate to heavy amounts were quite generally observed. Some of the more significant falls of the week were nearly 7.50 inches produced in a 2-hour period on Wednesday afternoon at Arendtville, Pa., and weekly totals of 3.70 inches at Helena, Ark., and 4.91 inches at Pikeville, Ky. Included in the severe storm reports were hailstones up to 3½ inches falling at Reading, Minn., on the evening of the 14th and causing damage to poultry, corn and soybeans over a 30-mile strip; and a tornado, also on the 14th, occurring near Northampton, Mass., and causing an estimated \$100,000 damage to property. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - MARYLAND - Melanoplus differentialis particularly, caused spotty damage to corn and soybeans on Eastern Shore. (U. Md., Ent. Dept.). LOUISIANA - Conocephalus fasciatus averaged 110 per 100 sweeps in 6 fields of rice in Vermilion Parish. (Spink). WISCONSIN - M. femur-rubrum quite numerous in many alfalfa fields, along some fence rows and roadsides. Rapidly approaching maturity, some winged forms present. Migration to new alfalfa seedlings, to tobacco and corn field edges will soon begin. Dissosteira carolina depositing eggs in light soil areas of Columbia County. (Wis. Coop. Sur.). MINNESOTA - M. femur-rubrum predominant species in east central district, mostly fourth and fifth instars in most fields. Some fields in northern counties of district have mostly second to fourth instars. Generally non-economic to light except scattered fields in central Mille Lacs, southeastern Sherburne and northern Anoka Counties, where populations ranged 12-45 per square yard. (Minn. Ins. Rpt.). SOUTH DAKOTA - Adult survey underway. Several areas in central region showed 20 per square yard in alfalfa and corn fields. Considerable damage evident. Dominant species were M. bivittatus and M. differentialis. (Hantsbarger, Klix). OKLAHOMA - Varied considerably, 6-20 per square yard, along roadsides in panhandle area, up to 50 in some spots. Second-generation M. bilituratus common. Up to 400 first and second-instar nymphs per square yard in one area of Cimarron County near hatching beds. Fall-seeded small grains will likely suffer considerable damage. Range populations averaged 4-10 per square yard in unsprayed areas. Grass growth excellent, therefore no visible damage to range evident. (Coppock). TEXAS - Hatching in progress. Medium infestation in Ochiltree County. (Hawkins). NEW MEXICO - Remained problem in alfalfa fields and gardens in many areas of State. (N. M. Coop. Rpt.). UTAH - Common throughout State in gardens and berry patches. Moved from range to alfalfa fields and orchards in many localities. Damaged range in Deer Flats, Dry Mesa, Elk Mountains and Blue Mountains areas of San Juan County. M. differentialis, Trimerotropis pallidipennis, Spharagemon eguale and S. collare damaged alfalfa, orchards and other crops in Millard County. Camnula pellucida extremely numerous in meadow areas south of Garfield, Kane County. Averaged 15 per square yard west of Ephraim, Sanpete County, and are largely winged adults in most areas. (Thornley, Knowlton). Serious throughout much of Emery County. (Olson, Knowlton). CALIFORNIA - M. cinereus heavy on pasture grass in Scott Valley, Siskiyou County. (Cal. Coop. Rpt.).

MORMON CRICKET (Anabrus simplex) - UTAH - Presently known infestations include 2 in Tooele County, one in San Juan County and one involving 2,000 acres in Daggett County. (Thornley, Knowlton).

EUROPEAN CORN BORER (Pyrausta nubilalis) - NEW JERSEY - Present throughout State. No heavy activity reported, but second-generation larvae are active in all areas. Moth activity increased August 5 and 8. (Ins. Dis. News!). MARYLAND - Some Frederick County fields show 4-20 percent larval infestations. Second-generation larvae generally light in corn on Eastern Shore. (U. Md., Ent. Dept.). DELAWARE - Heavy egg laying in one Kent County field of corn. (MacCreary, Conrad). VIRGINIA - Infesting 100 percent of ears of late sweet corn in Eastern Shore Counties. (Hofmaster). NORTH CAROLINA - Adults emerging from ears and stalks of field corn in Tyrrell County. Found for first time in Johnston County. (Scott, Weisman, Rabb). WISCONSIN - Second-brood moth emergence greatly accelerated at Platteville and LaCrosse, but no marked increase at other locations. Pupation 16 percent in Walworth, Dane, Rock, Green, Iowa and Grant Counties, with some emergence. Pupation not as high as expected, but may change within the next 7 days. Larvae relatively scarce in advance Dunn County corn fields. Up to 30 percent of plants infested in Ozaukee County. No pupation observed in Dunn or Ozaukee Counties. (Wis. Coop. Sur.). MINNESOTA - Moth emergence is 8 percent in southwest and 9 percent in south central districts. First-generation development has been slow and it appears the second generation will come too late to cause much

damage for 1958. (Minn. Ins. Rpt.). OHIO - Summer pupation in field corn very low. (Neiswander). IOWA - Egg mass counts on field corn reached or exceeded 100 per 100 plants in 10 percent of fields in Boone County. (Iowa Ins. Inf.). ARKANSAS - Fifth-instar larvae found in Crittenden and Lee Counties. Larvae pupating in Conway County. (Ark. Ins. Rpt.). SOUTH DAKOTA - Third to fifth-instar larvae, predominantly fifth instar, averaged 98 per 100 plants, in northeast district. Infestation averaged 46 percent. (Hantsbarger, Klix).

CORN EARWORM (*Heliothis zea*) - NEW JERSEY - Eggs more numerous, averaged 4 per 25 silks. More moths present in light trap catches. (Ins. Dis. Newsl.). MARYLAND - Light to moderate in mature corn in most sections. Larvae light on soybean pods at Preston. (U. Md., Ent. Dept.). VIRGINIA - Light on soybeans but infesting 100 percent of late sweet corn ears in Eastern Shore Counties (Hofmaster). None observed in any soybean fields in Northern Neck Counties. (Morris, Birdsall, McSwain). Damaged corn in Tazewell County. (Rowell, Reynolds). WISCONSIN - Poses threat to sweet corn. (Wis. Coop. Sur.). INDIANA - Appeared in late-planted corn in southern areas. (Everly). ARKANSAS - Larvae on grain sorghum in several areas of State. (Ark. Ins. Rpt.). OKLAHOMA - Medium to heavy feeding in most fields of irrigated field corn, Texas County. (Coppock). TEXAS - Medium to heavy on peanuts in Frio County. Up to 3 per plant feeding heavily on leaves, leaving ragging effect. (Harding). IDAHO - General in sweet corn in southwestern section, approximately 20 percent of ears infested. Larvae still 47 percent first and second instars. Damage expected to increase during remainder of harvest period. (Foote, Gittins). UTAH - Severe in Emery County, and in most southern localities checked. Light to moderate in Cache County. Peak flight was a catch of 9 moths at Ogden, August 9. (Knowlton). WASHINGTON - Caused severest damage to corn in Yakima Valley for past 12 years. Total of 900 moths caught in light trap on July 26, compared with 10 for similar time and place in past years. (Shipman). CALIFORNIA - Medium on corn in Clarksburg area, Yolo County, Cottonwood, Shasta County, and light locally, Tehama County. (Cal. Coop. Rpt.).

BEE T ARMYWORM (*Laphygma exigua*) - CALIFORNIA - Heavy on corn and pigweed in Santa Rosa area of Sonoma County. (Cal. Coop. Rpt.).

FALL ARMYWORM (*Laphygma frugiperda*) - NEW JERSEY - Caused some damage to corn in Bergen County. (Ins. Dis. Newsl.). DELAWARE - Few larvae feeding in pre-tasseling field and sweet corn in various fields throughout State. Rather heavy in small field corn in New Castle County. (MacCreary, Conrad). MARYLAND - Continued light to moderate in late corn, generally. Few heavy infestations reported. (U. Md., Ent. Dept.). VIRGINIA - Medium in late corn in Middlesex County (DeBusk), light in sorghum in northwestern Brunswick County (Basham). Heavy in some soybean and corn fields in Northern Neck Counties, some spraying underway. (Morris, McSwain). Along with armyworms, numerous in sorghum fields in localized Eastern Shore areas. (Hofmaster). GEORGIA - Heavy in whorls of late corn in Greene and Hart Counties. (Johnson). OHIO - Infesting sweet corn at Marietta in southern part of State. (Neiswander). OKLAHOMA - From 0-4 larvae per plant feeding in tassels and whorls of field corn, Cimarron County. (Coppock).

SORGHUM WEBWORM (*Celama sorghiella*) - ARKANSAS - Larvae on grain in several areas of State. (Ark. Ins. Rpt.).

DUSKY SAP BEETLE (*Carpophilus lugubris*) - MARYLAND - Generally abundant in corn ears in most sections. (U. Md., Ent. Dept.).

NORTHERN CORN ROOTWORM (*Diabrotica longicornis*) - WISCONSIN - Pupation has occurred and adults have been observed for first time in 1958 in third tier of counties above southern State boundary. (Wis. Coop. Sur.).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - ARKANSAS - Third-generation moths emerging in southwestern part of State. (Ark. Ins. Rpt.).

FALSE CHINCH BUGS (Nysius spp.) - NEW MEXICO - Damaged sorghum in Chaves and Roosevelt Counties. (N. M. Coop. Rpt.). IDAHO - N. ericae nymphs very abundant in several Teton County localities. Did not appear to be developing on plants where found. (Bishop).

A STINK BUG (Euschistus conspersus) - CALIFORNIA - Light on field corn in Two Rock area, Sonoma County. (Cal. Coop. Rpt.).

CORN LEAF APHID (Rhopalosiphum maidis) - RHODE ISLAND - Heavy on corn at Newport. (Matthewson). MARYLAND - Increased in tassels of sweet and field corn in Queen Annes and Caroline Counties, with 62 acres of popcorn treated in Caroline County. (U. Md., Ent. Dept.). DELAWARE - Prevalent on field corn in most areas of State. (MacCreary, Conrad). WISCONSIN - Numerous in corn fields in many sections of the State, with injury to all leaves on some plants observed. As high as 15 percent of plants showed injury in a Rock County field, but 5 percent injury more common where it occurs. Over 90 percent of late-planted corn in southern counties, where tassels not yet out of whorl, reported infested. Treatment for control reported from Dodge and Waukesha Counties. (Wis. Coop. Sur.). OHIO - Remained severe in northwestern part of State, but appears to be subsiding. In some fields, 25-50 percent of plants affected. (Neiswander). OKLAHOMA - Light numbers on corn and milo in northwest and panhandle sections. (Coppock). IDAHO - Caused spotted appearance of yellow dwarf on barley in Latah, Lewis and Nez Perce Counties. Originally reported (CEIR 8(30) : 648) as English grain aphid. (Foote). UTAH - Damage to spring barley decreasing as crops mature. Generally light on corn. (Knowlton). CALIFORNIA - Medium on corn in Clarksburg area of Yolo County and light in Redding area of Shasta County. (Cal. Coop. Rpt.).

ENGLISH GRAIN APHID (Macrosiphum granarium) - IDAHO - Large populations apparently developing in late barley fields in Idaho Falls area. One 20-acre field already heavily infested. (Kohl).

RICE STINK BUG (Oebalus pugnax) - LOUISIANA - Averaged 67 per 100 sweeps in 6 rice fields in Vermilion Parish. (Spink).

WHEAT MIDGE (Sitodiplosis mosellana) - MINNESOTA - Reported in Marshall, Kittson and Roseau Counties. Loss estimated at 1-10 percent. Appears confined to late-seeded wheat fields, which is very characteristic of this insect. (Minn. Ins. Rpt.).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - DELAWARE - Few larvae in alfalfa throughout State, with as many as 3 per 10 sweeps in one New Castle County field. (MacCreary, Conrad).

VARIEGATED CUTWORM (Peridroma margaritosa) - UTAH - Numerous in some Piute County alfalfa fields. (Buck, Thornley, Knowlton).

VELVETBEAN CATERPILLAR (Anticarsia gemmatilis) - LOUISIANA - Larvae averaged 5-10 per 100 sweeps in soybeans in southwest part of State. (Spink).

WEBWORMS (Loxostege spp.) - OKLAHOMA - Light in alfalfa in panhandle and northwest areas, but not found in all fields. (Coppock).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - DELAWARE - Averaged 3 per 10 sweeps in red clover and common in alfalfa in Sussex County. (MacCreary, Conrad). MARYLAND - Light on soybeans in Worcester County. (U. Md., Ent. Dept.). VIRGINIA - Observed on soybeans in Eastern Shore Counties (Hofmaster) and is light on same crop in many Northern Neck Counties (Morris, McSwain, Birdsall).

ALFALFA WEEVIL (Hypera postica) - DELAWARE - Larvae and adults common in alfalfa throughout the State. (MacCreary, Conrad). WYOMING - Averaged 30 larvae per 20 sweeps in several northern alfalfa fields, with 2-3 per 20 sweeps in other fields in same area. (Davison).

BEAN LEAF BEETLE (Cerotoma trifurcata) - INDIANA - Feeding on soybeans in Tippecanoe County (Gould), and extensively on same crop in southwestern section (Everly). VIRGINIA - Light to medium on soybeans in Northern Neck Counties (Morris, McSwain, Birdsall) and on soybeans in Eastern Shore Counties (Morris).

BLISTER BEETLES - DELAWARE - Epicauta sp. common in alfalfa in Kent County and in one field in New Castle County. (Conrad, McCreary). OKLAHOMA - Numbers in alfalfa throughout State down considerably. (Coppock). SOUTH DAKOTA - E. pennsylvanica adults becoming prominent in alfalfa fields in central and north-east areas. Averaged one per sweep in many localities. (Hantsbarger, Klix).

A COLASPIS (Colaspis sp.) - INDIANA - Feeding on soybeans in Tippecanoe County. (Gould).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - DELAWARE - Prevalent in alfalfa in parts of New Castle County. (MacCreary, Conrad). INDIANA - Feeding on soybeans in Tippecanoe County. (Gould).

STRIPED FLEA BEETLE (Phyllotreta striolata) - SOUTH DAKOTA - Averaged 14 adults per 20 sweeps on alfalfa in north central district, with up to 100 per 20 sweeps in one area. (Hantsbarger, Klix).

GREEN CLOVERWORM (Plathypena scabra) - DELAWARE - Increased in forage crops throughout State. (MacCreary, Conrad). MARYLAND - Increased on soybeans, particularly on lower Eastern Shore. Larvae averaged 9 per linear foot in some Worcester County fields. (U. Md., Ent. Dept.). OKLAHOMA - Found in isolated panhandle alfalfa fields. Not present in other sections. (Coppock). VIRGINIA - Averaged 3-4 per plant on soybeans in many Northern Neck Counties (Morris, Birdsall, McSwain) and especially numerous and generally quite small on soybeans in Eastern Shore Counties (Hofmaster).

MEXICAN BEAN BEETLE (Epilachna varivestis) - DELAWARE - Common to prevalent on soybeans in Sussex County. (MacCreary, Conrad).

PEA APHID (Macrosiphum pisi) - UTAH - Damaged alfalfa in parts of Box Elder, Millard, Juab and Emery Counties. (Knowlton). DELAWARE - Increased in alfalfa and red clover throughout State. (MacCreary, Conrad). OKLAHOMA - Numbers low, 0-12 per 10 sweeps, in irrigated and upland alfalfa in panhandle and in Ellis County. (Coppock). IDAHO - Ranged 2,630-19,450 per sweep in an alfalfa field in Canyon County. (Waters). WYOMING - Light throughout State, with 150-200 per 10 sweeps in alfalfa. (Davison).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Increased in panhandle area over one month ago. Averaged 75-125 per 100 sweeps in irrigated alfalfa. (Coppock).

ALFALFA PLANT BUG (Adelphocoris lineolatus) - WISCONSIN - Numerous in most alfalfa fields. (Wis. Coop. Sur.).

LYGUS BUGS (Lygus spp.) - UTAH - Continued serious problem on alfalfa, most susceptible crops and range plants. (Knowlton). SOUTH DAKOTA - Averaged over one per sweep on northeast district alfalfa. (Hantsbarger, Klix). IDAHO - Averaged 5-18 per sweep in few seed alfalfa fields in Canyon County. (Waters). WISCONSIN - L. lineolaris adults numerous in most alfalfa fields. (Wis. Coop. Sur.).

MEADOW SPITTLEBUG (*Philaenus leucophthalmus*) - MARYLAND - Adults averaged 1-3 per sweep on third-growth alfalfa in Frederick County. (U. Md., Ent. Dept.)
 WISCONSIN - Adults numerous in most alfalfa fields. (Wis. Coop. Sur.).

SAY STINK BUG (*Chlorochroa sayi*) - UTAH - Damage to grain crops decreased. Common on many other crops, with greatest damage to alfalfa seed. (Knowlton).

CLOVER LEAFHOPPER (*Aceratagallia sanguinolenta*) - SOUTH DAKOTA - Adults averaged one per sweep in alfalfa in northeast district. (Hantsbarger, Klix).

POTATO LEAFHOPPER (*Empoasca fabae*) - NORTH DAKOTA - Present in only 2 eastern alfalfa fields surveyed. Populations extremely light. (N. D. Ins. Rpt.).
 OHIO - Remained low on alfalfa. Damage extremely light or absent in untreated fields. (Neiswander). DELAWARE - Prevalent in alfalfa in New Castle County, common in red clover and alfalfa throughout State. (MacCreary, Conrad).
 MARYLAND - Averaged 1-6 per sweep on third-growth alfalfa in Frederick County. (U. Md., Ent. Dept.).

THREE-CORNERED ALFALFA HOPPER (*Spissistilus festinus*) - UTAH - Moderately numerous in scattered alfalfa fields and orchards. (Knowlton). LOUISIANA - In 25 sweeps 858 were collected in an untreated alfalfa test plot. (Spink).

CLOVER SEED CHALCID (*Bruchophagus gibbus*) - UTAH - Appears variable in seed-growing districts of State. (Knowlton).

SPIDER MITES - UTAH - Damage increased on northern and central field and market corn. Generally light on Millard County seed alfalfa crops. (Knowlton).
 MARYLAND - Light on soybeans in Worcester County. (U. Md., Ent. Dept.).
 IDAHO - *Tetranychus telarius* abundant in red clover fields around Hammett, Elmore County. (Edwards). ARKANSAS - On soybeans in some areas. (Ark. Ins. Rpt.).

LESSER CORNSTALK BORER (*Elasmopalpus lignosellus*) - TEXAS - Medium on peanuts in Frio County. (Harding).

SIX-SPOTTED LEAFHOPPER (*Macrosteles fascifrons*) - NORTH DAKOTA - Averaged 0.5-5.3 per sweep in late-planted flax in eastern area. (N. D. Ins. Rpt.)

A CASEMAKER (*Apterona crenulella*) - UTAH - Infested range plants in parts of Cache, Rich and Box Elder Counties. Light on same hosts in Oak Creek Canyon and at Pahvant, Millard County. (Knowlton).

ARMYWORM (*Pseudaletia unipuncta*) - RHODE ISLAND - Adults active at Narragansett, August 15. (Hansen). VIRGINIA - About destroyed oats and grass in 5-acre field and orchard grass in 6-acre field of orchard grass-ladino clover mixture in Dickenson County (Morris, Fletcher), and numerous in sorghum fields in localized areas on Eastern Shore, along with fall armyworms (Hofmaster).
 NORTH CAROLINA - Totally destroyed an acre of meadow in Caldwell County. (Culp, Farrier). GEORGIA - Moderate to heavy on coastal Bermuda, fescue and millet in Gwinnett, Hall, Gordon, Lumpkin, White, Hart and Elbert Counties. (Johnson).

A CHINCH BUG - LOUISIANA - Heavily infested St. Augustine grass lawns in East Baton Rouge Parish and in the greater New Orleans area. (Spink).

FRUIT INSECTS

CODLING MOTH (Carpocapsa pomonella) - NEW MEXICO - Third generation larvae feeding on apples in Hondo Valley. (N. M. Coop. Rpt.). UTAH - Infestations relatively heavy on apples in Juab and Millard Counties. (Knowlton). INDIANA - Entries reduced sharply at Orleans. (Marshall). Emergence increased slightly during August 8-10 at Vincennes. Peak larval activity expected late in August or early September. Injury at present in commercial orchards lightest recorded in last 8 years. (Hamilton).

ORCHARD MITES - WASHINGTON - Vasates cornutus and Tetranychus telarius moderate to severe on peaches in Wenatchee. (Anthon). NEW MEXICO - Heavy infestations of Tetranychus mcdanieli on apple trees in Hondo and Espanola Valleys; severely damaging foliage. (N. M. Coop. Rpt.). UTAH - Injury common throughout State, above normal. Tetranychus spp. predominate on apples and pears. (Knowlton). INDIANA - Populations remain threatening to apples in Orleans area. (Marshall). Remain active at Vincennes. (Hamilton). IDAHO - T. telarius abundant on apple trees in Idaho Falls area. (Kohl).

APPLE MAGGOT (Rhagoletis pomonella) - MINNESOTA - Remain active in all areas. (Minn. Ins. Rpt.).

AMERICAN PLUM BORER (Euzophera semifuneralis) - CALIFORNIA - Medium infestation of almonds in Durham, Butte County. (Cal. Coop. Rpt.).

YELLOW-NECKED CATERPILLAR (Datana ministra) - IDAHO - Common on apple trees in Moscow, Lewiston and Boise areas, moderate defoliation noted. (Gittins, Barr, Horn).

UNICORN CATERPILLAR (Schizura unicornis) - CALIFORNIA - Light infestation on plum tree in Citrus Heights area of Sacramento County. (Cal. Coop. Rpt.).

FALL WEBWORM (Hyphantria cunea) - WASHINGTON - Common on peaches and poplar at Wenatchee. (Anthon).

FRUIT TREE LEAF ROLLER (Archips argyrospila) - CALIFORNIA - Medium infestations in pear orchards in Camino area of El Dorado County. (Cal. Coop. Rpt.).

PEAR PSYLLID (Psylla pyricola) - CALIFORNIA - Light infestations of pear trees in Bryte, Yolo County. (Cal. Coop. Rpt.).

PEAR SLUG (Caliroa cerasi) - IDAHO - Causing heavy damage to fruit trees in Idaho Falls area. (Kohl).

OLIVE SCALE (Parlatoria oleae) - CALIFORNIA - Heavy infestation of almonds in Antioch area of Contra Costa County. (Cal. Coop. Rpt.).

HICKORY SHUCKWORM (Laspeyresia caryana) - MISSISSIPPI - Causing serious damage to small growers over State. (Hutchins).

GRAPE LEAF FOLDER (Desmia funeralis) - CALIFORNIA - Light infestations of grape vines in Chico, Butte County. (Cal. Coop. Rpt.).

MEALYBUGS - MISSOURI - Infesting grape vineyards in Rosati-Steelville area. Infestations not uniform and vary from one vineyard to another. (Wkly. Rpt. Fr. Grs.).

YELLOW SCALE (Anonidiella citrina) - CALIFORNIA - Heavy infestations of orange trees in Orland, Glenn County. (Cal. Coop. Rpt.).

Citrus Insect Situation, Lake Alfred, Florida, Second Week of August - PURPLE SCALE activity continued to decline, but new hatch has begun. Some further reduction in activity anticipated but not as much as in recent weeks. FLORIDA RED SCALE activity increased with beginning of new hatch, and further increase is expected. Infestations will be high this fall. CITRUS RED MITE activity declined, but not as rapidly as in recent weeks. There will be only small reduction in next week or two. CITRUS RUST MITE activity declined further, but there will be less reduction in next week or two. Level will be generally high through August. (Pratt, Thompson, Johnson, Aug. 13).

TRUCK CROP INSECTS

CABBAGE APHID (*Brevicoryne brassicae*) - WASHINGTON - Common in gardens at Bellingham. Winged forms migrating. (Doucette). OREGON - Adults and nymphs light on broccoli and cauliflower in Gresham-Woodburn-Hillsboro area August 1-10. Populations building up. (Hanna). UTAH - Damaging in Emery, Salt Lake and Utah Counties. (Knowlton). WISCONSIN - Moderate populations reported in Kenosha and Racine Counties. (Wis. Coop. Sur.).

GREEN PEACH APHID (*Myzus persicae*) - DELAWARE - Becoming prevalent on broccoli in New Castle County. Increasing on peppers in Kent and Sussex County. (MacCreary, Conrad). IDAHO - Light infestations in potato seed fields in Butte, Fremont and Caribou Counties. (Bishop).

CABBAGEWORMS - OREGON - Damaging infestations of *Trichoplusia ni*, *Pieris rapae* and *Plutella maculipennis* on broccoli and cauliflower in Gresham-Woodburn-Hillsboro area from July 25 to August 10. Controls of *T. ni* appeared unsatisfactory. (Hanna). DELAWARE - *T. ni*, *P. rapae* and *P. maculipennis* common to prevalent on crucifers and other vegetables in State. Cabbage being damaged in Kent County. (MacCreary, Conrad). VIRGINIA - May be worst looper year ever experienced in eastern area. Growers on Eastern Shore have lost extensive acreages of cole crops. Light trap catches about 15 times higher than comparable period in 1956-57 in Norfolk area. (Hofmaster). WISCONSIN - Infestations of *T. ni* in cabbage light in Racine and Kenosha Counties. Light populations of *P. maculipennis* present. (Wis. Coop. Sur.).

YELLOW-STRIPED ARMYWORM (*Prodenia ornithogalli*) - DELAWARE - Larvae feeding on beet foliage in western Kent County. (MacCreary, Conrad).

BEET ARMYWORM (*Laphygma exigua*) - WASHINGTON - Adults very abundant in light traps at Walla Walla from July 25 to August 8. Usual flight for entire year much less. Next brood may be troublesome within two weeks. (Cook, Aug. 15). OREGON - Overlapping generations infesting beets and wild hosts in Willamette Valley. Twenty acres of beets in Benton County almost total loss and 40 acres of kale damaged in spots. (Crowell).

TWO-SPOTTED SPIDER MITE (*Tetranychus telarius*) - IDAHO - Abundant few potato fields, causing minor to heavy damage near Idaho Falls. (Kohl).

POTATO PSYLLID (*Paratrioza cockerelli*) - UTAH - Damaging potatoes in areas of Washington County. (Hughes, Knowlton). WYOMING - Infestation in northern area averaged one adult per 100 sweeps. Potatoes now near maturity and psyllids not expected to do any appreciable damage. (Davison).

POTATO APHID (*Macrosiphum solanifolii*) - IDAHO - Becoming more common in potato seed fields in southeastern area. Populations higher than at same time 1957. High populations noted on nightshade and ground cherry. (Bishop).

Potato Aphids in Maine - Populations of Aphis abreviata, Macrosiphum solanifolii, Myzus persicae and M. solani on untreated potatoes in experimental plantings at Presque Isle continue to increase, but at rate lower than usual for this time of summer, owing to increasing importance of fungus diseases, parasites and predators. (Shands).

WESTERN POTATO FLEA BEETLE (Epitrix subcrinita) - IDAHO - Populations continue very low in potato fields examined throughout southeastern area. (Bishop).

POTATO FLEA BEETLE (Epitrix cucumeris) - MAINE - Trace present at Presque Isle. It appears unlikely that appreciable numbers will be present at any time on potatoes this summer. (Shands).

LOOPERS - OREGON - Infestations generally present on potato plantings at Ontario. (Bond, Aug. 10).

A STRIPED BLISTER BEETLE (Epicauta sp.) - ALABAMA - Caused considerable damage to late tomatoes in Lee County. (Grimes).

MEXICAN BEAN BEETLE (Epilachna varivestis) - WYOMING - Averaged 3-4 larvae per 25 sweeps in southeastern area. Only minor damage occurring. (Davison).

GREEN CLOVERWORM (Plathypena scabra) - DELAWARE - Small larvae common to prevalent on lima beans over State. (MacCreary, Conrad).

LEAFHOPPERS - NEW JERSEY - Very numerous, on lettuce and related plants in northern area. (Ins. Dis. News.). WISCONSIN - Populations of Macrostelus fascifrons light and present in 50 to 75 percent of Racine-Kenosha carrot acreage. (Wis. Coop. Sur.).

GRASSHOPPERS - NEW MEXICO - Light to moderate infestations damaging seedling lettuce near Artesia, Eddy County. (N. M. Coop. Rpt.).

HORNWORMS (Protoparce spp.) - DELAWARE - Eggs common on peppers in Sussex and Kent Counties. No larvae seen. (MacCreary, Conrad).

FALL ARMYWORM (Laphygma frugiperda) - DELAWARE - Larva found feeding on pepper in Kent County. (MacCreary, Conrad).

EUROPEAN CORN BORER (Pyrausta nubilalis) - MARYLAND - Twenty-four percent of pepper plants infested in Worcester County. (U. Md., Ent. Dept.). DELAWARE - Larvae ranging from light to heavy on peppers throughout State. (MacCreary, Conrad).

ASPARAGUS BEETLE (Crioceris asparagi) - DELAWARE - Prevalent on asparagus ferns. (MacCreary, Conrad).

TOBACCO INSECTS

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - NORTH CAROLINA - Moderate injury to tobacco in northeastern counties. (Scott). VIRGINIA - Severe on some tobacco crops in Cumberland County. (Seay).

APHIDS - WISCONSIN - Observed on tobacco in Dane and Vernon Counties. About 5 percent of plants infested in Dane County field. (Wis. Coop. Sur.).

BUDWORMS (Heliothis spp.) - GEORGIA - Heavy infestations of Heliothis virescens and H. zea on Turkish tobacco in Hart and Elbert Counties. (Johnson). NORTH CAROLINA - Infestations generally very light in Granville County. (Chamberlin). MARYLAND - H. virescens damaging 40 out of 100 tobacco plants,

one field in St. Marys County. Many larvae parasitized by Campoletis argentifrons. (U. Md., Ent. Dept.).

TOBACCO HORNWORMS (Protoparce spp.) - NORTH CAROLINA - Infestations sufficient to require control many fields. In younger fields, larvae averaged one per plant. (Chamberlin). VIRGINIA - Medium on tobacco in Cumberland County. Second-generation hatching in area. (Seay).

COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - ALABAMA - Infestations averaged 8.2 percent in Madison County, 44.4 percent in Lee County, 19.2 percent in Cherokee County and 25.0 percent in Shelby County. In central and southern areas migrations are well underway. (Grimes). ARKANSAS - Second-generation weevil emergence general most fields, definite overlap with first generation in most areas. Control difficult some places. (Ark. Ins. Rpt.). OKLAHOMA - Approximately 4 percent of squares infested in fields in Washita County. (Coppock). LOUISIANA - Percent infestation averaged 11.4 in Ouachita Parish, 15.4 Morehouse Parish and 16.8 in Richland Parish. (Spink). Average square infestation 9 percent in Madison Parish, ranging from 2-45 percent. Infestations increasing rapidly many fields with some migration occurring. (Smith et al.). MISSISSIPPI - Infestations extremely spotty in delta counties; generally very light. (Merkl et al.). TENNESSEE - Continues a problem in southern counties. Infestations spotted with some local migration. In event of general rains, infestations may cause considerable damage to young squares and bolls. Average percent punctured squares was 21 compared with 44 percent at same time in 1957. (Locke). GEORGIA - Infestation averaged 28 percent in 15 northern fields, ranging from 0 to 69 percent. (Johnson). SOUTH CAROLINA - Damage increased generally where crop not protected. Migration begun in many Coastal Plain counties. (Cott. Lett.). Populations soared and migration commenced in Florence area. (Fye et al.). NORTH CAROLINA - Migration general over State. Infestation counts high some areas of State with some treatment still underway. Counts highest in Scotland, Wayne, Wilson, Johnson and Chowan Counties. (Cott. News Lett.). TEXAS - Infestation increasing in treated irrigated fields in McLennan and Falls Counties as population pressures intensified. Continued treatment needed. Considerable boll damage occurred in dryland, early-planted, untreated fields, and in top bolls where treatments stopped too soon. (Parencia et al.). Infestations not severe but some damage being caused in eastern, central, northeastern, north central, south plains and west cross timbers areas. (Gaines).

BOLLWORMS (Heliothis spp. et al.) - NEW MEXICO - Eggs present all fields checked in Sierra County. (N. M. Coop. Rpt.). ALABAMA - In northern area infestations spotty. Some fields where treatments not applied infestations ranged up to 14 percent. Most larvae in second and third instars. Very few adults or eggs noted. (Grimes). ARKANSAS - Activity continues to increase though egg and small larval counts down in many fields. Another heavy emergence of adults may occur around August 21-25. (Ark. Ins. Rpt.). OKLAHOMA - From 4-6 percent of bolls damaged in Roger Mills County; few eggs noted. (Flora). LOUISIANA - Percent infestation averaged 6.1 in Ouachita Parish, 3.5 in Morehouse Parish and 3.4 in Richland Parish. (Spink). Average square infestation at Tallulah, Madison Parish, was 9 percent. An average of 12.12 eggs and 2.45 larvae were found per 100 terminals in Tallulah area. Infestations have been severe enough most fields in area to require control. Some boll damage has occurred. (Smith et al.). MISSISSIPPI - Light to heavy damage to squares and some boll damage to older fields in delta counties. Egg deposition light and very few small larvae reported. (Merk et al.). TENNESSEE - Continues to cause considerable damage over western area. No eggs found. Control results vary widely. (Locke).

GEORGIA - Egg counts averaged 6 and larvae 4 per 100 terminals in 15 northern fields. (Johnson). SOUTH CAROLINA - Activity increased in Bamberg, Chesterfield, Dorchester, Hampton and Saluda Counties. Increased damage expected. (Cott. Lett.). Some fields in Florence area still heavily infested and protective measures will continue to be necessary. (Fye et al.). TEXAS - Control still required in irrigated fields in McLennan and Falls Counties. (Parenia et al.). Infestations not serious but causing some damage in eastern, central, northeastern, north central, south plains and west cross timbers areas. (Gaines). ARIZONA - Heavy infestations some fields in Pima County. Sufficient numbers in some fields in Maricopa and Pinal Counties to warrant control. Moths very numerous many fields. (Bottger, Kauffman, Sheets).

PINK BOLLWORM (Pectinophora gossypiella) - TEXAS - Heavy infestations on late cotton in lower Rio Grande Valley. Larvae being found at gins and in other areas where harvesting underway. (Gaines).

COTTON LEAFWORM (Alabama argillacea) - NEW MEXICO - Two larvae found in cotton fields in Sierra County. (N. M. Coop. Rpt.). ARKANSAS - One larva found in Craighead County and one adult trapped at Hope. (Ark. Ins. Rpt.). TEXAS - Few larvae in succulent plants in field in Falls County. (Parenia et al.). Some damage reported. (Gaines).

SALT-MARSH CATERPILLAR (Estigmene acrea) - ARIZONA - Early-instar larvae present over most of cotton-growing areas. (Bottger, Kauffman, Sheets).

LOOPERS - CALIFORNIA - Trichoplusia ni light to medium in Clovis-Sanger area of Fresno County. (Stromberg, Ext. Serv.). ARKANSAS - Present in number of cotton fields. (Ark. Ins. Rpt.). OKALHOMA - Light in Washita County. (Coppock). ARIZONA - Small loopers becoming abundant again some fields. (Bottger, Kauffman, Sheets). TEXAS - Some damage reported. (Gaines).

COTTON LEAF PERFORATOR (Bucculatrix thurberiella) - ARIZONA - Heavy infestations in Maricopa and Pinal Counties. (Bottger, Sheets, Kauffman).

COTTON SQUARE BORER (Strymon melinus) - TENNESSEE - Found for first time this year in State. Collected in Chester County. (Locke).

OMNIVOROUS LEAF ROLLER (Platynota stultana) - CALIFORNIA - Light to heavy infestations on cotton in Holtville area of Imperial County. (Cal. Coop. Rpt.).

APHIDS - NEW MEXICO - Generally light infestations of Aphis gossypii most areas, some spotty and heavy infestations. (N. M. Coop. Rpt.). CALIFORNIA - A. gossypii serious in few fields in Sanger River Bottom and Navelencia areas of Fresno County. (Stromberg, Ext. Serv.). ALABAMA - Moderate to heavy infestations of A. gossypii in Madison, Lee, Cherokee and Shelby Counties. Infestations in Madison County on young cotton and could become serious if treatments are not used. (Grimes). ARKANSAS - Populations increasing though few fields with damaging numbers at present. (Ark. Ins. Rpt.). LOUISIANA - Control applied several experimental fields at Tallulah. (Smith et al.). MISSISSIPPI - Light infestations common in delta counties. (Merkl et al.). TENNESSEE - Generally light to medium infestations in western area. Some control required in fruiting fields. (Locke). GEORGIA - Light infestations of A. gossypii in Bartow, Polk, Gordon, Hart, Elbert and Madison Counties. (Johnson). TEXAS - Damage reported. (Gaines).

FLEAHOPPERS - TEXAS - Infestations generally light. (Gaines).

LYGUS BUGS (Lygus spp.) - CALIFORNIA - Medium to heavy in untreated fields in Fresno area of Fresno County and building up in Shafter area of Kern County. (Stromberg, Leigh, Beards, Ext. Serv.). ARIZONA - Populations increasing some fields nearly all areas. (Bottger, Kauffman, Sheets). TEXAS - Some damage reported. (Gaines).

A PLANT BUG (Largus cinctus) - ARIZONA - Adults numerous in cotton fields at Marana, Pima County, and Queen Creek, Maricopa County, with potential damage great. (Bibby).

STINK BUGS - ARIZONA - Increasing few fields in Salt River Valley. Species mostly Chlorochroa sayi and Thyanta pallido-virens spinosa. Populations light in Pima County, being heavily parasitized. (Bottger, Kauffman, Sheets).

WHITEFLIES - ALABAMA - A heavy infestation noted in Madison County. (Grimes). ARKANSAS - Present in large number of cotton fields. (Ark. Ins. Rpt.).

SPIDER MITES - CALIFORNIA - Generally heavy many fields in Shafter area of Kern County. (Leigh, Beards, Ext. Serv.). TEXAS - Some damage reported. (Gaines). ALABAMA - An extremely severe infestation observed in Madison County. (Grimes). ARKANSAS - Continue to be serious pest of cotton, especially in northeastern area. Causing defoliation some spots in heavily infested fields. (Ark. Ins. Rpt.). LOUISIANA - Count was 6.82 spider mites per square inch in one field at Tallulah. Heavy, spotted infestations appearing where some controls used; additional controls being applied. (Smith et al.). TENNESSEE - Causing severe damage over western area. Conditions favorable for buildup. (Locke). GEORGIA - Moderate infestations in Hart, Elbert and Madison Counties. (Johnson). SOUTH CAROLINA - Populations increased in Coastal Plain counties. Little economic damage expected. (Cott. Lett.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

GYPSY MOTH (Porthetria dispar) - MICHIGAN - First male moths trapped July 31 in Michigan for this season. One moth caught in each of two traps at Victor and Bath Townships, Clinton County, about one and one-half miles south of an area that was sprayed in 1956. This is a heavily wooded area with little cultivation and low swampy land along a creek. To date 3,923 traps have been set in 7 counties in the State comprising about 1,500 square miles. This includes all previously known infested sites in Michigan. The 15 state trap tenders are patrolling these traps every week to 10 days. (PPC Cen. Reg., July Rpt.).

FALL WEBWORM (Hyphantria cunea) - DELAWARE - Increasing on shrubs and trees throughout State, heaviest infestation still in Sussex County. Feeding lightly on elms and sycamore over State. (MacCreary, Conrad). SOUTH DAKOTA - Infestations on chokecherry and aspen in western area. (Klix, Hantsbarger).

SPRUCE BUDWORM (Choristoneura fumiferana) - MINNESOTA - Egg mass collections in Cascade area of Lake Superior average 4 masses per 15-inch branch indicating probable heavy defoliation next year. (Minn. Ins. Rpt.).

ORANGE-STRIPED OAKWORM (Anisota senatoria) - RHODE ISLAND - Heavy feeding on oak in Kingston area. (Howard).

RED-HEADED PINE SAWFLY (Neodiprion lecontei) - MINNESOTA - Heavily defoliating jack pine plantations around Libby and Big Sandy Lake in Savannah State Forest. Some tree mortality expected. (Minn. Ins. Rpt.).

LOCUST LEAF MINER (Chalepus dorsalis) - INDIANA - Abundant in extreme southern and northern parts of State. (Schuder).

WHITE-PINE WEEVIL (Pissodes strobi) - VIRGINIA - Damaged white pines in nurseries and pine plantations in southwest. (Miller). PENNSYLVANIA - A very noticeable infestation generally on white pine in northern and western areas.

Causing 2-3 years' growth of Scotch pine terminals to die. Reported more abundant than for many years. (Udine). General over State. (Pepper).

A WEEVIL (*Pissodes approximatus*) - OHIO - Becoming a pest of Scotch pine in Christmas tree plantings. (Neiswander).

IPS BEETLES (*Ips* spp.) - INDIANA - *Ips grandicollis* attacking Scotch pine slash and *I. pini* common in white pine prunings at LaPorte. (Schuder).

A JUNE BEETLE (*Polyphylla crinita*) - CALIFORNIA - Damaging young pines in Leevining, Mono County. (Rice, USFS).

A CONE BEETLE (*Conophthorus* sp.) - WISCONSIN - Seed loss on jack pine in Buffalo County estimated between 20 and 75 percent. (Wis. Coop. Sur.).

A LEAF MINER (*Camereria* sp.) - NORTH CAROLINA - Widespread, moderate to severe damage to oak leaves over northeastern counties. (Scott).

GALL INSECTS - TEXAS - Oak galls heavy on past oak in Brazos County. (Garner).

SMALLER EUROPEAN ELM BARK BEETLE (*Scolytus multistriatus*) - WISCONSIN - Emergence reached its peak. As of August 14, a total of 1548 cases of Dutch elm disease. (Wis. Coop. Sur.).

ELM LEAF BEETLE (*Galerucella xanthomelaena*) - UTAH - Severely skeletonized large elms at Farmington. (Knowlton). VIRGINIA - Damaged foliage of elms at Arlington and Amherst. (Rowell).

LACE BUGS - WISCONSIN - Populations along the Mississippi River appear to be heavier and causing more chlorosis than 10-12 years ago. Elm is principal host in Buffalo-Trempealeau area, but infested leaves of hackberry turning yellow in Pepin area. Lighter infestations on sumac and black walnut. (Wis. Coop. Sur.).
MISSISSIPPI - *Corythucha cydoniae* attacking pyracantha and azalea in southern part of State. (Hutchins).

A TWIG BORER (*Proteoteras aesculana*) - CALIFORNIA - Heavy population damaging silver maples in San Jose, Santa Clara County. (Cal. Coop. Rpt.).

MIMOSA WEBWORM (*Homadaula albizziae*) - INDIANA - Common on honeylocust throughout southern half of State. (Schuder). Injuring mimosa trees in Evansville. (Everly). PENNSYLVANIA - Numbers of honeylocust seriously infested at Huntingdon. (Udine).

EUONYMUS SCALE (*Unaspis euonymi*) - ALABAMA - A heavy infestation on euonymus shrubs in Madison County. Every twig on some of the plants completely covered with the scale. (Grimes). CALIFORNIA - Heavy infestation of euonymus plants in Sacramento. (Cal. Coop. Rpt.). NEW YORK - One case in Suffolk County so severe that insect was covering leaves as well as stems. (N. Y. Wkly. Rpt.).

SCALE INSECTS - MISSISSIPPI - *Aspidiotus juglans-regiae* causing considerable damage in red bud trees in Hattiesburg. (Hutchins). OKLAHOMA - *Chionaspis americana* on Chinese elm in Washita and Beckham Counties. (Apt). CALIFORNIA - *Aspidiotus camelliae* and *Saissetia oleae* heavy on holly plants in Watsonville, Santa Cruz County. (Cal. Coop. Rpt.). MINNESOTA - *Gossyparia spuria*, *Lecanium corni*, *Pulvinaria innumerabilis* and *Chionaspis furfura* infesting elms in St. Louis Park area to such an extent that many are dying. (Minn. Ins. Rpt.).

MITES - MARYLAND - Spider mites heavily infesting young street maples at Lanham. (U. Md., Ent. Dept.). UTAH - Damaging ornamental ash trees at St. George and mountain ash in northern area. (Knowlton).

JUNIPER WEBWORM (Dichomeris marginella) - MARYLAND - Damaging junipers at Dundalk. (U. Md., Ent. Dept.).

A JAPANESE WEEVIL (Pseudocneorhinus bifasciatus) - DELAWARE - First record from New Castle County. Collected on various ornamentals including azalea and lilac. (Connell). MARYLAND - Damaging privet, azalea, rose and other ornamentals at Greenbelt. (U. Md., Ent. Dept.).

DOGWOOD TWIG BORER (Oberea tripunctata) - NORTH CAROLINA - Infestations in dogwoods in Stanly and Moore Counties. (Jones, Harris, Farrier).

BAGWORM (Thyridopteryx ephemeraeformis) - MARYLAND - Heavy on cedars in Dorchester County. (U. Md., Ent. Dept.). VIRGINIA - Attacking cedar trees in large numbers in various places in Halifax County. (Hall, Rowell).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - WASHINGTON - Aedes nigromaculis in moderate numbers in Franklin and Benton Counties. (LaMar). UTAH - Abundant and troublesome west of Ephraim, in Delta-Abraham area and throughout Cache Co. Very numerous at Syracuse, Davis Co. Much concern in northern Utah about equine encephalitis in persons and horses. (Knowlton). MINNESOTA - In 429 larval collections made in Twin City area August 8-14 Aedes vexans was taken 270 times, Culex tarsalis 70; in 71 biting collections A. vexans 70, C. tarsalis 4; in 90 light trap collections A. vexans 90, C. tarsalis 6 and Culiseta inornata 32. (Minn. Ins. Rpt.). WISCONSIN - Problem in some northern areas. (Wis. Coop. Sur.). NORTH CAROLINA - Vast increase of A. sollicitans in Onslow County and some found in Pamlico County. (Ashton).

SHEEP KED (Melophagus ovinus) - UTAH - Numerous in farm flocks in Rich and Cache Counties. (Knowlton).

A SCREW-WORM (Callitroga sp.) - NEW MEXICO - Considerable increase in number of cattle infested in Sierra County. (N. M. Coop. Rpt.).

CATTLE GRUBS (Hypoderma spp.) - UTAH - Cattle annoyed by heel flies in east Millard County areas. (Knowlton).

FLIES - WISCONSIN - Buildup in fly populations reported. (Wis. Coop. Sur.). NEW YORK - House flies continue at high population levels. (N. Y. Wkly. Rpt.). ILLINOIS - Stable flies increasing in southern area. (Ill. Ins. Rpt.).

HORN FLY (Siphona irritans) - UTAH - Abundant on unsprayed cattle herds generally over State. (Knowlton). NEW YORK - Increasing problem on dairy and beef cattle. (N. Y. Wkly. Rpt.).

CHIGGERS - WISCONSIN - Causing annoyance in Kenosha area. (Wis. Coop. Sur.).

BLOODSUCKING CONENOSE (Triatoma sanguisuga) - FLORIDA - Reported to be quite numerous in a home and causing considerable irritation by their bites at Lake Monroe, Seminole County. (Fla. Coop. Sur.).

BENEFICIAL INSECTS

PARASITES AND PREDATORS - NEW MEXICO - Syrphid fly adults very abundant in alfalfa fields near Hatch, Dona Ana County. (N. M. Coop. Rpt.). IDAHO - Geocoris sp. averaged 3-6 per sweep in many alfalfa and clover seed fields in southwest section. Orius tristicolor ranged 3-10 per sweep in some red clover fields and Nabis sp. 1-4 in most red clover fields in Canyon County. (Waters)

NEBRASKA - Lady beetles averaged 10 larvae and 15 adults per 10 sweeps in Republican Valley alfalfa. Other predators included, nabids at 13 per 10 sweeps, Orius spp. 20 and Geororis spp. 7. (Andersen).

MISCELLANEOUS INSECTS

BLACK CARPET BEETLE (Attagenus piceus) - NORTH DAKOTA - Home infestations reported from many areas of the State. (N. D. Ins. Rpt.).

BROWN-BANDED ROACH (Supella supellectilium) - VIRGINIA - Heavy in a number of homes in Richmond. (Willey). MARYLAND - In a home in Baltimore. (U. Md., Ent. Dept.). NORTH DAKOTA - Infestation reported in a Fargo home. (N. D. Ins. Rpt.).

EUROPEAN EARWIG (Forficula auricularia) - UTAH - Populations heavy in many communities. (Knowlton).

FIELD CRICKET (Acheta assimilis) - MARYLAND - Numerous around homes in Glenridge section of Hyattsville. (U. Md., Ent. Dept.).

A FULGORID (Oliarus truncatus) - CALIFORNIA - Adults light on safflower in Yolo Pass area, Yolo County. (Cal. Coop. Rpt.).

CORRECTIONS

CEIR 8(30) : 648 -ENGLISH GRAIN APHID (Macrosiphum granarium) - IDAHO - Should read CORN LEAF APHID (Rhopalosiphum maidis) - IDAHO.

CEIR 8(33) : 725 - Under scale insects, delete complex after Gossyparia spuria.

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Protoparce sexta	quinq.	Heliothis zea	vires.
ALABAMA									
Crossville 8/7,12,14	22		19				115	739	
ARKANSAS									
Fayetteville 8/7-13	60	42		20	190			114	
Hope 8/7-13	3	2						27	
Kelso 8/7-13	6	42		3	7			45	
Morrilton 8/7-13	77	36						461	
Osceola 8/7-13								57	
Stuttgart 8/7-13				3				6	
ILLINOIS									
Urbana 8/8-14	72	86	29	95				24	
INDIANA (Counties)									
Orange 8/5-11	51	30	20	8		41	18	3	
Tipecanoe 8/6-13	94	78	61	60		1		5	
LOUISIANA									
Baton Rouge 8/8-14	6	5	74		1012			127	
Shreveport 8/12, 14	9	1	7		4			107	
MAINE									
Monmouth 8/10-16	2								
MISSISSIPPI									
Grenada 8/4-9	2	7	2					3	
Senatobia 8/1-8	5	4			3			3	
State College 8/9-15	37	40	54		275			148	1
*Stoneville 8/8-14	116	117	92		167	21	2	213	37
NEBRASKA									
Alliance 7/29-8/3	58	1		47			2		
Lincoln 8/2-8	141	91		40				13	
Kearney 7/29-8/4	172	7		86		2	3	13	
North Platte 8/1-7	327	37		249	12		5	19	2
NORTH CAROLINA									
Clayton 8/14	42	6	38			12	3	392	7
Faison 8/14	4	14	56			6	1	116	14
SOUTH CAROLINA									
Clemson 8/9-15	108	42	263	5	37	14	5	115	1
Florence 8/10-16	353	123	1012	57	555	233	12	11,039	296
Charleston 8/11-17	7	2	74		166	57		411	1
TENNESSEE (Counties)									
Blount 8/5-11	48	116	224	16	1	12	16	44	
Cumberland 8/5-11	54	16	36	10		14	30	10	
Greene 8/5-11	101	28	48	8		84	120		
Johnson 8/5-11	259	168	456	86				40	
Maury 8/5-11	44	28	36			24	40	4	
Robertson 8/5-11	32	46	8	2		24	60	6	

*Four traps - Stoneville.

ADDITIONAL NOTES

COLORADO - APHIDS increased on potatoes and corn. No significant increase of LEAFHOPPER populations indicated in light trap collections. TWO-SPOTTED SPIDER MITE building up on corn in Morgan and Weld Counties. CABBAGE LOOPER spotted in 5 south central counties, with 1-5 larvae per 10 plants. SIX-SPOTTED LEAFHOPPER in some fields in same counties, with 1-10 per 100 plants, as is POTATO APHID, which averaged 5-20 per plant. PEA APHID population low, 50-100 per 100 sweeps on alfalfa in these counties. (Exp. Sta.).

ILLINOIS - Pupation of first-generation EUROPEAN CORN BORER complete in western part of State between Rock Island and Quincy, with only 45.2 percent having pupated. Moth emergence also complete in this area. Egg mass counts averaged 48 per 100 plants, with hatching just beginning in some fields. Pupation complete in northern area, with 62 percent of larvae pupating, moth emergence 83 percent complete. Egg mass counts vary 10-50 per 100 plants, with no hatch noted. CORN LEAF APHID greatly reduced in most fields by parasites, disease and predators. FLOUR BEETLES, GRANARY WEEVILS and INDIAN-MEAL MOTH more abundant in stored grain in southern part of State than for several years. (Ill. Ins. Rpt.).

NEBRASKA - SPOTTED ALFALFA APHID building up in Republican Valley and Frenchman Creek areas, but remained light with 1 per 10 sweeps. Ranged to 100 per sweep in 2 Red Willow County fields. PEA APHID again building up in northeast and Republican Valley area. Averaged 425 per 100 sweeps. ALFALFA WEBWORM moderate in Republican Valley area, webbing noticeable in some fields. Averaged 12 per 10 sweeps. VARIEGATED CUTWORM heavy in central area. Averaged 5 per square foot in alfalfa in Clay, Adams and Phelps Counties, all parasitized. BLISTER BEETLES very abundant, 10 per 10 sweeps, in most alfalfa fields checked in Republican Valley area. TWO-SPOTTED SPIDER MITE moderate in panhandle region. (Andersen)

NEW YORK - Insects of sweet corn in the Hudson Valley - Young CORN EARWORM in 2-3 percent of ears examined on untreated sweet corn in Dutchess and Ulster Counties; none found in Columbia County. Second-brood EUROPEAN CORN BORER appearing with peak hatch expected August 20-30. Small percentage of FALL ARMYWORM larvae appearing in pre-tassel corn. The most abundant insects in corn ears were CORN LEAF APHID and in Ulster County, larvae of SAP BEETLES. (N.Y. Wkly. Rpt.).

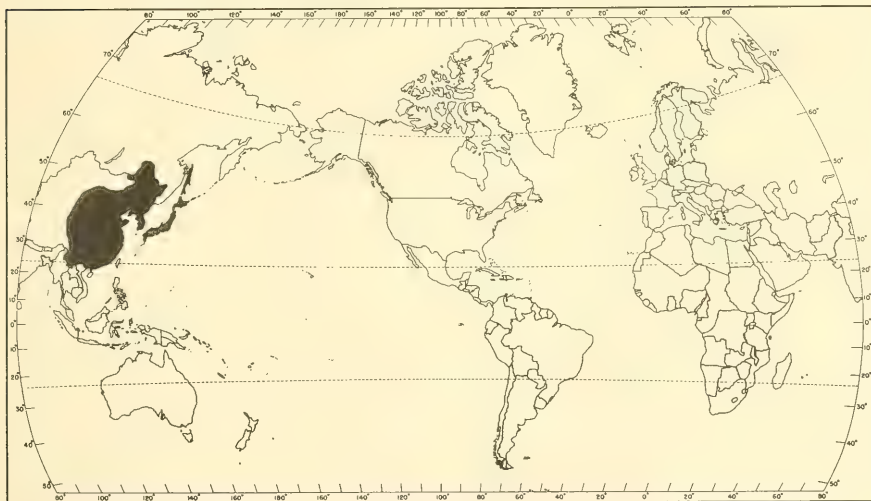
INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

PEACH FRUIT MOTH (Carposina niponensis Walsingham)

Economic Importance: This carposinid is considered one of the most important pests of pome fruits in the Far East. It is very serious on apples in Japan, Korea, Manchuria and China, and may cause heavy losses if not controlled. Damage to peaches is often confused with that caused by Oriental fruit moth (Grapholitha molesta (Busck)) in Japan and Korea. With the increased amount of travel to and from Japan in the past several years, a correspondingly greater number of interceptions of C. niponensis have occurred at U. S. ports of entry. From 1948 until 1954, it was taken 14 times, mostly from apples originating in Japan.

Hosts: Peach, apple, pear, plum, apricot, quince, nectarine and similar fruits.

Distribution: Occurs throughout Japan and Korea, and is widespread in China and Manchuria. Also recorded in the literature in the Soviet Far East (Sakhalin).



General Distribution of Peach Fruit Moth

Life History and Habits: From one to three generations a year have been recorded, but two generations a year seem to be more common. The first brood of adults appears in late May and June on Honshu (Japan), the second from middle of July to early August and the third the middle of August to early September. In areas where there is only one generation, the adults emerge in May or June with hibernation following. Hibernating larvae are larger than those that pupate and emerge the same year. The adults are nocturnal, depositing eggs in clusters, ranging from 3 to 70 eggs, on or near the fruits. Each female will lay about 200 eggs. Larvae hatch in 5-8 days, develop in 12 to 18 days, first crawling about gregariously for a short time, feeding slightly, then boring into the fruits at the calyx end. They tunnel all parts of the fruit, feeding on fleshy parts as well as the seeds. Damage resembles that caused by the apple maggot, but does not resemble damage by codling moth. Several larvae may feed in each fruit. On peach the entrance hole is noticeable because of the presence of a small amount of secretion on the surface of fruit, but on apple only a light, brownish colored secretion is present. Pupation lasts about two weeks and takes place in shallow cells in the ground under the trees.

Description: Adult small, 6-9 mm. long, wing expanse about 15-19 mm. Color dark mottled gray. Forewings long and narrow, hind wings with fringe of long scales. Resembles many other species of family. Eggs elliptical, 0.44 x 0.36 mm. Attachment end pointed, apical end blunt and rounded, light yellowish-brown with chorion granulated. Newly hatched larva orange-red, changes to milky-white, then back to orange-red at maturity. Mature larva 13 mm. long. Pupa typical of group, reddish-brown. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies.). CEIR 8(34) 8-22-58



Female of Carposina niponensis

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PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GRASSHOPPER adults heavy in some localities of Wisconsin, caused some damage to red clover. Scattered economic infestations in eastern South Dakota, heaviest in central and north central districts. (p. 755). EUROPEAN CORN BORER activity increased in New Jersey and Maryland. Heavy flights in areas of North Carolina and Alabama. (p. 755). CORN EARWORM heavy and damaging in several states. (p. 755).

SOUTHWESTERN CORN BORER heavy in several areas of New Mexico and found for first time in Desha County, Arkansas. (p. 756). FALSE CHINCH BUGS heavy and damaging in several New Mexico areas. (p. 756). TWO-SPOTTED SPIDER MITE buildup on Colorado corn, damaging same crop in Utah and Washington. (p. 757). WHEAT JOINTWORM increased in Illinois. (p. 757).

ALFALFA WEEVIL new to Rhode Island. (p. 758). PEA APHID counts high in several areas of Nebraska. (p. 758). SPOTTED ALFALFA APHID increased in Colorado. (p. 758). LYGUS BUGS numerous in several states. (p. 759).

MEADOW SPITTLEBUG adults more numerous in Wisconsin than any time since 1944. (p. 759). FLEA BEETLES building up in Colorado potato fields, numerous in Wisconsin, Delaware and Massachusetts. (p. 762).

Worst buildup of BOLLWORMS in South Carolina cotton in several years. Heavy on cotton in northern Alabama. Large numbers of moths emerging in Arkansas. Larvae building up in some Arizona localities. (p. 765). SPIDER MITES general on cotton throughout South Carolina, caused severe damage in western Tennessee, are major pests of cotton in Arkansas and extremely heavy in northern Alabama. (p. 767).

FALL WEBWORM heavy in mountainous areas of Colorado, abundant on deciduous trees in area of Pennsylvania. (p. 768).

WEBWORM MOTH catches high in Nebraska. (p. 773).

CORRECTIONS. (p. 771). ADDITIONAL NOTES. (p. 773).

WEATHER OF THE WEEK ENDING AUGUST 25

Continued hot and dry west of the Continental Divide, falling temperatures east of the Divide with a touch of autumn in northern areas, general rains in the Great Plains about midweek and in the East at the end, and a hurricane east of Florida still moving northwestward on the 25th was the week's general weather pattern. The hot, dry weather in the Far West maintained an extremely high fire hazard in the Pacific Northwest and an average to high hazard elsewhere in that region. Lightning started many fires in the Sequoia National Forest of California and an uncontrolled fire was reported in Mount Baker National Forest on the 23d. Temperatures for the week averaged as much as 10° above normal in the Pacific Northwest where the summer to-date is among the warmest on record. As an example of the unusually dry weather in that region, Portland, Oregon on August 24 had had 55 consecutive days without measurable precipitation. The week was 3° to over 6° cooler than normal in much of the mid-continent area. Lowest temperatures occurred at the end of the period when a cold front moved to the Gulf of Mexico. Madison, Wis., recorded 37° on the 25th, the lowest temperature ever observed there in August during a record dating back more than 80 years. Cranmoor, Wis., recorded 24° on the 25th, International Falls, Minn., 32° on the 22d, Grand Marais, Mich., 31° on the 23d and light frost was reported at higher elevations in the Black Hills of South Dakota.

Precipitation east of the Divide was quite variable, but generally totaled from $\frac{1}{2}$ to 1 inch with 2 to over 4 inches in scattered areas of heavy thunderstorms. In the North Central Interior, dry weather was becoming serious in many areas of South Dakota where only widely scattered showers occurred, dry soil was reported in western and central North Dakota, soil moisture continued short in western and eastern Montana and rain was badly needed in the southwestern quarter of Minnesota. Midweek showers relieved the moisture deficiency in some southern and eastern areas of Wisconsin and most of Lower Michigan received beneficial heavy rain on the 20th and 21st. Heavy rains that locally ranged from 5 to 9 inches in central and eastern Oklahoma on the 20th caused considerable flood damage. Central and southern Louisiana also received unusually heavy rains the latter part of the week, Alexandria reporting 9.02 inches in the last 72 hours of the period. Severe local storms were relatively few during the week. But hurricane Daisy located about 220 miles east of Melbourne, Fla., at 5 a.m., August 26, was still moving northwestward at 5 m.p.h. While the hurricane offered no serious threat to the east coast at that time, its curvature away from the coast still was not yet definitely established. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - NORTH CAROLINA - Several species caused moderate to severe damage to corn, tobacco and gardens in many western counties. (Scott). LOUISIANA - Heavy on pasture grass in Livingston, St. Helena, East Feliciana and West Feliciana Parishes. Averaged 166 per 100 sweeps of rice in 6 fields at Gueydan, Vermilion Parish. (Spink). ARKANSAS - Annual survey in western part of State showed very low numbers in most areas. Counts averaged lower than in 1957 except in small number of isolated spots where grasshoppers have built up over a period of years. Only a small percent of those observed were of the more destructive species. (Ark. Ins. Rpt.). WISCONSIN - Melanoplus femur-rubrum adults heavy, damaged red clover in some eastern Portage County locations. Estimated at 75 or more per square yard in some fields. Grasshoppers averaged 10-45 per square yard in forage on light soil areas in Green, Lake and Marquette Counties. Caused considerable leaf reduction. Damage heavy in some Wood County fields, treatment being applied. Large numbers in some fields in Winnebago, Waukesha and Shawano Counties. In general, populations vary considerably between fields. (Wis. Coop. Sur.). ILLINOIS - Averaged 0.7 per square yard in clover and alfalfa fields in northeast section and 5.6 in southeast section. (Ill. Ins. Rpt.). SOUTH DAKOTA - Adult survey showed scattered economic infestations in eastern portion of State, with up to 25 per square yard in some localities. Central and north central districts are the heaviest infested. Dominant species are M. bivittatus, M. differentialis and M. femur-rubrum. (Hantsbarger, Klix). MONTANA - Cooperative rangeland control programs in Phillips and Stillwater Counties, were completed on July 2 and July 12. The Wheatland-Meagher area of 90,000 acres was checked and found free from economic populations. Control was applied to heavily infested areas of the Ft. Belknap Reservation. For the most part, spraying was conducted to protect crop and hay land. Mormon crickets in the spray area were successfully controlled. The southern part of the reservation remains heavily infested with range species. (PPC, West. Reg., July Rpt.).

UTAH - Damage spotted. Serious in some areas of Piute and Box Elder Counties. (Knowlton). NEW MEXICO - Damaged sorghum heads in Curry and Quay Counties. Most severe along fence rows and ditch banks. (N. M. Coop. Rpt.). CALIFORNIA - M. devastator medium on dry pasture in Yolo County. (Cal. Coop. Rpt.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - NEW JERSEY - Activity increasingly heavy. (Ins. Dis. News1.). MARYLAND - Larval damage to stalks and ears of sweet corn increased in most sections. Infestations ranged 4-44 percent of plants in Frederick and Queen Annes County. (U. Md., Ent. Dept.). NORTH CAROLINA - Heavy flight of moths ovipositing in Northampton County peanut field. (Cooper, Farrier). WISCONSIN - Moths laying eggs. Hatched egg masses in Rock County, August 18. Pupation varies considerably within different areas. In 4 western counties, 25 percent of larvae were killed by parasites, principally Lydella grisescens, but Horogenes punctorius and Sympiesis viridula were noted. (Wis. Coop. Sur.). NORTH DAKOTA - Some heavy infestations in Fargo area sweet corn. (N. D. Ins. Rpt.). SOUTH DAKOTA - Pupation complete, with some emergence, in southeast district. Larvae predominantly fifth instar in central district. (Hantsbarger, Klix). ILLINOIS - Egg masses averaged 92 per 100 plants in field corn in north central section. (Ill. Ins. Rpt.). OHIO - First second-brood oviposition observed at Wooster, August 18. Later observations indicated high incidence of predation, presumably by coccinellids. (Triplehorn). ALABAMA - Heavy flights underway in northern part of State. Eggs plentiful on grain sorghum. (Eden).

CORN EARWORM (Heliothis zea) - NEW JERSEY - Heavy increase in activity, becoming several times as numerous in trap collections as during previous week. (Ins. Dis. News1.). MARYLAND - Increased in sweet corn ears in all sections. (U. Md., Ent. Dept.). DELAWARE - Remained heavy in ears of corn throughout Sussex County. (MacCreary, Conrad). ARKANSAS - Averaged 25 per sweep in Conway County alfalfa fields. (Ark. Ins. Rpt.). ILLINOIS - Mostly

fifth instar or have pupated and emerged in southern field corn. Eggs being laid on fresh silks. Moths flying in northern section, laying eggs on fresh silks of field and sweet corn. Few eggs have hatched. (Ill. Ins. Rpt.). UTAH - Infesting 88-99 percent of ears in corn fields and gardens in Iron County. (Knowlton). IDAHO - Nearly 100 percent of garden sweet corn ears infested in Parma. (Waters). TEXAS - Feeding on leaves of peanuts in Erath and Comanche Counties. (Hawkins). NEW MEXICO - Feeding in Lea County sorghum heads, damage heavy but spotty. Heavy infestations destroyed corn ears. (N. M. Coop. Rpt.). CALIFORNIA - Heavy in corn in Woodland and Winters areas, Yolo County, and in Imperial Beach, San Diego County. (Cal. Coop. Rpt.). WASHINGTON - Caused heavy damage to sweet corn near Quincy, Grant County. Eggs and larvae present. (Landis). ALA. - Adults emerged northern areas. (Eden).

FALL ARMYWORM (Laphygma frugiperda) - NEW JERSEY - Activity increasingly heavy. Becoming very numerous. (Ins. Dis. Newsl.). MARYLAND - Increase expected in late field and sweet corn. (U. Md., Ent. Dept.). DELAWARE - Decreased on late field corn. Few full-grown larvae on younger stalks throughout State. (MacCreary, Conrad). VIRGINIA - Severe on corn in one area of Orange County; damage extensive to many stalks. (Estes). ALABAMA - Large numbers of adults on legume crops in Lee County. (Ruffin). ARKANSAS - Averaged 16 per 10 sweeps in alfalfa in Conway County. (Ark. Ins. Rpt.). LOUISIANA - Remained very numerous on corn in northern part of State. (Spink). NEW MEXICO - Damaged sorghum heads near Lovington, Lea County. (N. M. Coop. Rpt.). CALIFORNIA - Heavy in corn at Bonita, San Diego County. (Cal. Coop. Rpt.).

LOOPERS - ARIZONA - Averaged 10 larvae per 100 heads of sorghum in Graham County. (Woodruff).

BLISTER BEETLES - COLORADO - Several species caused damage on corn, alfalfa, potatoes, ornamentals and other plants throughout eastern counties. (Ext. Serv., Exp. Sta.). DELAWARE - Epicauta sp. common in Kent County alfalfa. (MacCreary, Conrad).

CORN ROOTWORMS (Diabrotica spp.) - COLORADO - Adults of D. virgifera averaged 2-4 per plant, feeding on tassels and silk in Prowers, Bent, Otero, Pueblo and Larimer Counties. (Exp. Sta.). SOUTH DAKOTA - D. virgifera adults averaged 3-5 per plant in one corn field in Turner County. Adults of D. undecimpunctata howardi averaged 7 per 20 sweeps in alfalfa fields in southeast district. (Hantsbarger, Klix).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - NEW MEXICO - Severe, damaged corn in De Baca, Quay, Curry and Roosevelt Counties. Caused stalks to break. (N. M. Coop. Rpt.). ARKANSAS - Most moths have emerged. Found in corn for the first time in Desha County. (Ark. Ins. Rpt.).

CHINCH BUG (Blissus leucopterus) - TEXAS - Heavy, locally on maize in Motley County. (Hawkins).

FALSE CHINCH BUGS (Nysius spp.) - NEVADA - Heavy migrations occurred in Reno area, Washoe County. (Bechtel, Aug. 15). UTAH - Mass populations still being encountered; sometimes in alfalfa, small grains and gardens. (Knowlton). NEW MEXICO - Infesting 6,000 acres of sorghum in Curry County, with estimated 50 percent loss in some fields. Heavy and damaging sorghums in Quay, Roosevelt, Lea, De Baca and Chaves Counties. (N. M. Coop. Rpt.).

STINK BUGS - TEXAS - Medium on maize in Motley County. (Hawkins). ARIZONA - Averaged 40-60 per 100 heads in sorghum, Graham County. (Woodruff).

A FIELD CRICKET - NORTH DAKOTA - Scattered, moderate to heavy, in flax fields in northern Cass County. (N. D. Ins. Rpt.). SOUTH DAKOTA - More abundant than usual in fields throughout eastern portion of State. Averaged 15 nymphs per square yard in one alfalfa field in Kingsbury County. (Hantsbarger, Klix).

CORN LEAF APHID (Rhopalosiphum maidis) - MARYLAND - Heavy on sweet corn in Chestertown area. (U. Md., Ent. Dept.). WISCONSIN - Colony size not as large as in 1957, although high percentage of corn is infested. Numbers reduced by parasites, but injury to corn is more evident. (Wis. Coop. Sur.). DELAWARE - Marked decrease on corn. (MacCreary, Conrad). OHIO - Severe infestation in several northwestern counties has subsided. Appears to be very little damage to crop. Fields heavily infested are recovering. (Triplehorn). CALIFORNIA - Heavy in sorghum fields in Clarksburg area, Yolo County. (Cal. Coop. Rpt.).

SORGHUM MIDGE (Contarinia sorghicola) - MISSISSIPPI - Heavy on sorghum in Delta counties where cultural practices have been neglected. (Green).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - COLORADO - Buildup on corn in Prowers, Bent, Otero and Pueblo Counties. (Exp. Sta.). UTAH - Damaged corn at Farmington. (Knowlton). WASHINGTON - Caused moderate to severe damage to sweet corn near Quincy and several other communities in Columbia Basin. (Landis).

HESSIAN FLY (Phytophaga destructor) - ILLINOIS - Survey showed large reduction over 1957 population. Average puparia per 100 tillers in wheat were: 1956 - 15.49; 1957 - 6.28; and 1958 - 2.91. (Ill. Ins. Rpt.).

A LYGAeid (Paromius longulus) - LOUISIANA - Averaged 30 adults and 13 nymphs per 100 sweeps in 6 fields of rice at Gueydan, Vermilion Parish. (Spink).

RICE STINK BUG (Oebalus pugnax) - LOUISIANA - Averaged 101 adults and 13 nymphs per 100 sweeps in 6 rice fields at Gueydan, Vermilion Parish. (Spink).

WHEAT JOINTWORM (Harmolita tritici) - ILLINOIS - Survey showed an increase in infestation. Average percentage of stems infested for past 3 years were: 1956 - 3.55; 1957 - 3.73; and 1958 - 6.13. (Ill. Ins. Rpt.).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - UTAH - Adults numerous in alfalfa fields in Box Elder, Weber, Davis and Salt Lake Counties. Caused moderate damage to some alfalfa fields in Delta-Desert area. (Knowlton). ARKANSAS - Averaged 7 per 10 sweeps in Carroll County alfalfa fields and 8 in Conway County alfalfa. (Ark. Ins. Rpt.). ILLINOIS - Averaged 3 per 100 sweeps in clover and alfalfa in northeast section and 13 in southeast section. (Ill. Ins. Rpt.).

CLOVER HEAD CATERPILLAR (Grapholitha interstinctana) - ILLINOIS - Adults averaged 3 per 100 sweeps in clover and alfalfa fields in northeast section and 10 in southeast section. (Ill. Ins. Rpt.).

GREEN CLOVERWORM (Plathypena scabra) - MARYLAND - Decreased on soybeans in some areas. (U. Md., Ent. Dept.). DELAWARE - Common on alfalfa and soybeans. (MacCreary, Conrad). INDIANA - Moderate on soybeans in many sections. (Gould). ARKANSAS - Averaged 4 per 10 sweeps of alfalfa in Carroll County, 6 in Conway County. (Ark. Ins. Rpt.). ILLINOIS - In clover and alfalfa, averaged 23 per 100 sweeps in northeast and 53 in southeast sections. (Ill. Ins. Rpt.). VIRGINIA - Infesting soybeans in several areas (Matheny et al.).

VELVETBEAN CATERPILLAR (Anticarsia gemmatilis) - LOUISIANA - Adults and small larvae very numerous in soybeans, St. Landry Parish. (Spink). VIRGINIA - Approximately 6 per 10 feet of row space in Northumberland County soybeans (Saville), also in soybeans in Gloucester County (Birdsall) and Lancaster County (McSwain). Few adults taken in light trap at Painter, Accomack County, in past 2-3 weeks. (Hofmaster).

STRIPED CUCUMBER BEETLE (*Acalymma vittata*) - INDIANA - Caused damage to foliage of soybeans in several areas of the State. (Gould).

WEBWORMS - DELAWARE - *Loxostege similalis* common in some alfalfa fields. (MacCreary, Conrad). ARKANSAS - *L. similalis* averaged 18 per 100 sweeps in Conway County alfalfa fields. (Ark. Ins. Rpt.). WASHINGTON - Large numbers of *Nomophila noctuella* being caught in light trap at Walla Walla. Recorded as a pest of alfalfa and clover. (Cook).

ALFALFA WEEVIL (*Hypera postica*) - RHODE ISLAND - Adults and larvae on alfalfa in Providence, Kent and Washington Counties. First record for State. Adults averaged 1-3 per 100 sweeps, larvae found occasionally August 1. Det. W. H. Anderson, R. E. Warner. (Hansen, Kerr).

BEAN LEAF BEETLE (*Cerotoma trifurcata*) - INDIANA - Caused foliage damage to soybeans. (Gould). VIRGINIA - Increased on soybeans on Eastern Shore. (Hofmaster).

A COLASPIS (*Colaspis* sp.) - INDIANA - Caused foliage damage to soybeans in several areas of State. (Gould). ILLINOIS - Adults averaged 10 per 100 sweeps in clover and alfalfa fields in northeast section and 13 in southeast section. (Ill. Ins. Rpt.).

PEA APHID (*Macrosiphum pisi*) - NEVADA - Abundant on alfalfa for this late in season in Elko County. (Menke, Aug. 15). NEBRASKA - Increased throughout most of State. Ranged 5-197 per 100 sweeps in northeast, 0-307 in east central, 440-3485 in central, 240-1733 in southwest and 300-1100 in south central sections. (Howe). IDAHO - Greatly reduced in most untreated red clover fields in Canyon County. (Waters). WYOMING - Averaged 310 per 100 sweeps in alfalfa in northern Sweetwater County. (Davison). MARYLAND - Averaged less than 5 per sweep on alfalfa, Frederick and Howard Counties. (U. Md., Ent. Dept.). UTAH - Injured alfalfa in Box Elder County. Moderate damage to alfalfa in Beaver, Tooele, Millard and Wasatch Counties. (Knowlton). ARKANSAS - Averaged 150 per 100 sweeps in alfalfa fields in Carroll County and 50 in Conway County. (Ark. Ins. Rpt.). ILLINOIS - In alfalfa and clover fields, averaged 122 per 100 sweeps in northeast and 150 in southeast sections. (Ill. Ins. Rpt.).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - NEVADA - Abundant and caused moderate damage in many alfalfa fields, other than Lahontan variety, in Moapa and Virgin Valley, Clark County. (Hoff, Aug. 15). COLORADO - Increased in Prowers, Bent, Otero, Crowley and Pueblo Counties. Light, 100-400 per 100 sweeps, in Delta County August 5. New infestations appeared at Palisade and Orchard Mesa, Mesa County, with 3000-5000 per 100 sweeps. Winged forms most abundant. First specimens taken in Garfield County August 11 were winged forms. (Exp. Sta.). NEBRASKA - Counts in alfalfa per 100 sweeps in southwest and south central counties were Perkins, 20; Dundy, 8-133; Hitchcock, 20; Red Willow, 6-80; Furnas, 6; Phelps, 0-28; Adams, 4; and Clay, 50. (Howe). Reported for first time in 1958 from Gosper and Frontier Counties and averaged 29 per 100 sweeps in these 2 counties. (Andersen). NEW MEXICO - Appeared again in Eddy and Chaves County fields. (N. M. Coop. Rpt.). UTAH - Some damage to fourth-crop alfalfa. Several fields sprayed in Dixie area of Washington County. Light to moderately numerous in Iron, Beaver and Millard County fields generally. (Knowlton).

YELLOW CLOVER APHID (*Therioaphis trifolii*) - ILLINOIS - Averaged 12 per 100 sweeps in clover and alfalfa fields in northeast and 185 in southeast sections. (Ill. Ins. Rpt.).

LYGUS BUGS (*Lygus* spp.) - MASSACHUSETTS - Nymphs of *L. lineolaris* suddenly becoming numerous. Averaged 75 per 100 sweeps on one Hampshire County field. (Shaw, Lavigne, Aug. 5). NEW MEXICO - Heavy in several fields of seed alfalfa, Chaves, Lea and Eddy Counties. (N. M. Coop. Rpt.). WISCONSIN - *L. lineolaris* populations very high in many alfalfa fields. (Wis. Coop. Sur.). UTAH - Adults and nymphs abundant in Tooele and Washington County alfalfa fields. (Knowlton). ILLINOIS - *L. lineolaris* adults averaged 250 per 100 sweeps in clover and alfalfa in northeast section and 105 in southeast section. (Ill. Ins. Rpt.). ARIZONA - Heavy in alfalfa fields in Graham County, 300-350 adults and nymphs per 100 sweeps. (Woodruff).

MEADOW SPITTLEBUG (*Philaenus leucophthalmus*) - WISCONSIN - Adults more numerous than any time since 1944 and currently infesting greater area of State than in 1944. (Wis. Coop. Sur.). ILLINOIS - Averaged 220 adults per 100 sweeps in clover and alfalfa fields in northeast section and 10 in southeast section. (Ill. Ins. Rpt.).

PLANT BUGS - MASSACHUSETTS - Nymphs of *Adelphocoris lineolatus* becoming numerous. Averaged 37 per 100 sweeps in one Hampshire County field. (Shaw, Lavigne, Aug. 5). WISCONSIN - *A. lineolatus* populations very high in many alfalfa fields. (Wis. Coop. Sur.). ILLINOIS - Nymphs averaged 400 per 100 sweeps in clover and alfalfa in northeast section and 325 in southeast section, *Adelphocoris rapidus* adults averaged 250 and 105 respectively in same crops. (Ill. Ins. Rpt.).

POTATO LEAFHOPPER (*Empoasca fabae*) - NEBRASKA - Counts per 100 sweeps in alfalfa were 12.5-55 in northeast, 4-96 in east central, 36-300 in central, 2-150 in southwest, 0-150 in south central and 30-120 adults and 0-40 nymphs in southeast sections of State. (Howe). MARYLAND - Approximately 1 per sweep in 16 alfalfa fields surveyed, Frederick and Howard Counties. Much lighter than at same time in 1957. (U. Md., Ent. Dept.). WISCONSIN - Populations continued variable between and within alfalfa fields. Generally less numerous than in 1957. (Wis. Coop. Sur.). DELAWARE - Prevalent in Sussex County alfalfa, common elsewhere. (MacCreary, Conrad). ILLINOIS - Averaged 50 adults and 53 nymphs per 100 sweeps in clover and alfalfa in northeast section and 75 adults and 105 nymphs in southeast section. (Ill. Ins. Rpt.). VIRGINIA - Medium on Loudoun County alfalfa. (Gerken).

THREE-CORNERED ALFALFA HOPPER (*Spissistilus festinus*) - ARKANSAS - Averaged 18 per 10 sweeps in alfalfa in Carroll County and 59 in the same crop in Conway County. (Ark. Ins. Rpt.).

CLOVER SEED CHALCID (*Bruchophagus gibbus*) - IDAHO - Averaged 20 per sweep in Canyon County red clover fields. (Waters).

THRIPS - NEW MEXICO - Damaged seed alfalfa near Carlsbad, Eddy County. (N. M. Coop. Rpt.). UTAH - Extremely numerous in alfalfa fields, especially seed fields, in Millard, Beaver and Utah Counties. (Knowlton).

LESSER CORNSTALK BORER (*Elasmopalpus lignosellus*) - TEXAS - Fourth-generation adults on peanuts in Erath and Comanche Counties. (Hawkins).

CRANBERRY GIRDLER (*Crambus topiarius*) - WASHINGTON - Caused severe damage to grasses grown for seed in some fields in Spokane area. (Harwood).

A CHINCH BUG - LOUISIANA - Caused considerable damage to St. Augustine grass in East Baton Rouge, St. Landry and Acadia Parishes and in the greater New Orleans area. (Spink).

WESTERN HARVESTER ANT (*Pogonomyrmex occidentalis*) - UTAH - Has kept large areas of rangeland bare. Also, problem on several thousand acres of croplands over State. (Knowlton).

EUROPEAN CHAFER (Amphimallon majalis) - In the principal infested area involving Monroe, Ontario, Seneca and Wayne Counties, NEW YORK, infestation was found outside the regulated area only in Waterloo, Seneca County. In the Syracuse infested area adults were found outside the regulated area in Camillus, Lysander, Manlius, Onondaga and VanBuren, Onondaga County, extending the infestation mostly west and less to the south and east. Adults were found on property adjacent to previously controlled infested areas in Buffalo, Lockport and Niagara Falls. Two adults were caught in the periphery of the Meriden, CONNECTICUT, infested area, approximately 0.3 of a mile north of the center of known infestation. Scouting in WEST VIRGINIA and PENNSYLVANIA gave negative results. (PPC, East. Reg., July Rpt.).

FRUIT INSECTS.

EUROPEAN RED MITE (Panonychus ulmi) - MASSACHUSETTS - Causing some damage in orchards. (Wheeler). MARYLAND - Populations decreasing on apples. (U. Md., Ent. Dept.).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - COLORADO - Continues to be problem in pear orchards in Mesa County. (Exp. Sta.). MARYLAND - Building up in some orchards. (U. Md., Ent. Dept.). VIRGINIA - Medium on apples in some areas of York County and Hampton City. (Adams).

ORCHARD MITES - NEW MEXICO - Heavy infestations of Tetranychus sp. in several orchards in Otero, Lincoln, Bernalillo, Sandoval and Rio Arriba Counties. Bryobia praetiosa complex heavily damaging foliage locally in Otero and De Baca Counties. (N. M. Coop. Rpt.). UTAH - Foliage damage severe in many Iron and Washington County apple, plum and pear orchards. Damage also conspicuous in Davis County. (Knowlton). WASHINGTON - Overwintering forms of Eriophyes pyri moving into buds of infested trees in moderate to heavy numbers in fruit-growing areas around Wenatchee and Chelan. (Burts). Heavy damage to young bearing pear trees in Quincy area. Rust mites extremely heavy on apple nursery stock in Prosser area. (Brannon). CALIFORNIA - Vasates schlechtendali medium infestation on apple leaves in Yucaipa area of San Bernardino County. (Cal. Coop. Rpt.).

APPLE MAGGOT (Rhagoletis pomonella) - MASSACHUSETTS - Emergence in cages continues at rate of 1-3 flies per day. Adults seen frequently in trees. Main migration has not reached peak. (Whitcomb, Garland, Aug. 15). MARYLAND - Heavy infestation of apples in southern Washington County. (U. Md., Ent. Dept.). RHODE ISLAND - Abundant in Providence County. (Tibbits).

CODLING MOTH (Carpocapsa pomonella) - UTAH - Severe commonly in Iron County apple orchards. Serious in some Washington and Millard County apples. (Knowlton). MARYLAND - A few stings and some entries in apples. (U. Md., Ent. Dept.). CALIFORNIA - Medium on walnut trees in Riverside, Riverside County. (Cal. Coop. Rpt.).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - MARYLAND - Light to moderate damage to apples in orchards where first brood not controlled. (U. Md., Ent. Dept.). DELAWARE - Pupae and adult collected Kent County August 18. Emergence of adults from collected pupae began August 19. (MacCreary, Conrad).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - NEW JERSEY - Twig activity much later this summer. (Ins. Dis. Newsl.).

A SCARABAEID (Cotinis texana) - NEW MEXICO - Heavy infestations in peach orchards in southern half of State and considerable damage to ripening fruit. (N. M. Coop. Rpt.). CALIFORNIA - In large populations in Vista, San Diego County. Some attacking orange fruit. (Cal. Coop. Rpt.). ARIZONA - Damage to peaches and grapes, probably by this species. (Woodruff).

PEACH TWIG BORER (Anarsia lineatella) - CALIFORNIA - Medium to heavy on stone fruits in areas of Sutter, San Diego and Colusa Counties. (Cal. Coop. Rpt.).

SHOT-HOLE BORER (Scolytus rugulosus) - CALIFORNIA - Heavy on peach fruit at Mesa Grande, San Diego. (Cal. Coop. Rpt.).

PEAR PSYLLA (Psylla pyricola) - WASHINGTON - Heavy in pear orchard near White Salmon. (Brannon).

MEXICAN FRUIT FLY (Anastrepha ludens) - MEXICO - Some 260,000 parasites were released in different locations in the states of Michoacan, Puebla, Oaxaca, Sinaloa, Nayarit, Colima, Jalisco and Nuevo Leon. Material from some of these localities is being reared to determine if the parasites are established and to what extent. The sixth and seventh sprayings were completed in Tijuana and the sixth in Tecate, Baja California. A total of 50,879 host plants were sprayed on 8,674 properties. A total of 1,114 traps were operated at Ensenada, Tecate and Tijuana, Baja California, with 452 properties trapped and 5,077 inspections made. No Mexican fruit flies were taken and none have been trapped since August 20, 1957. (PPC, Mex. Reg., July Rpt.). All trappings in the Nogales locality, Santa Cruz County, ARIZONA, along the Mexican Border, were negative, as were those in CALIFORNIA. (PPC, West. Reg., July Rpt.).

CALIFORNIA RED SCALE (Aonidiella aurantii) - CALIFORNIA - Heavy on orange trees in Sanger, Fresno County. (Cal. Coop. Rpt.).

CITRUS BLACKFLY (Aleurocanthus woglumi) - TEXAS - Scouting was carried on in Cameron and Hidalgo Counties with 30,264 trees on 496 properties inspected. No infestation was found in this area. (PPC, So. Reg., July Rpt.).

MEXICO - In the chemical control zones of the states of Tamaulipas, Nuevo Leon and Sonora 172,251 trees were inspected on 2,369 properties and 24 infested trees were found on 8 properties. All infestations were very light, none near International Border. In the eastern area 4,705 trees on 81 properties were sprayed in State of Tamaulipas and 34,494 trees sprayed on 46 properties in State of Nuevo Leon. All known infestations in western area have been sprayed. A total of 460,900 parasites liberated in 6 municipalities in the biological control zone of the State of Tamaulipas. (PPC, Mex. Reg., July Rpt.).

TRUCK CROP INSECTS

FLEA BEETLES - NEVADA - Extremely numerous and causing localized, heavy damage to potato foliage in Smith Valley, Lyon County. (Batchelder, Galloway, Aug. 15). UTAH - Moderate damage to potatoes in Antimony. (Knowlton). COLORADO - Epitrix tubensis building up, 80-200 per 100 sweeps in potato fields in Garfield County. Control necessary. (Exp. Sta.). WIS. - Striped flea beetle populations appear higher than normal in some localities. (Wis. Coop. Sur.). VIRGINIA - Very heavy on cole crops in Eastern Shore counties. (Hofmaster). DELAWARE - E. cucumeris very heavy on potatoes in Kent County. (MacCreary, Conrad). MASSACHUSETTS - Second brood of Epitrix cucumeris abundant. (Wheeler).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - DELAWARE - Feeding heavily on fruit and foliage of a field of tomatoes in Sussex County and fairly common on this crop throughout area and in Kent County. Heavy on potatoes in Sussex County. (MacCreary, Conrad).

A BLISTER BEETLE (Epicauta sp.) - CALIFORNIA - Heavy damage to young tomato plantings in Niland area of Imperial County. (Cal. Coop. Rpt.).

TOMATO FRUITWORM (Heliothis zea) - NEW MEXICO - Severe damage to untreated and improperly treated tomato fields near Deming, Luna County. (N.M. Coop. Rpt.). MARYLAND - Infestations from various localities. Expected to increase. (U. Md., Ent. Dept.).

HORNWORMS (Protoparce spp.) - DELAWARE - Fairly heavy on tomatoes in southwest Sussex County and light throughout rest of State. (MacCreary, Conrad).

COLORADO - Averaged 2 larvae per tomato plant, Adams County. (Canning Industry). NEW YORK - More abundant than usual on tomatoes in Nassau County. (N.Y. Wkly. Rpt.).

APHIDS - WISCONSIN - Potato aphids building up in Racine and Kenosha Counties, but not present in Rhinelander area where normally expected. Moderate populations of cabbage aphids seem difficult to control in Kenosha and Racine Counties, and more numerous than for past 3 or 4 years in Madison area. (Wis. Coop. Sur.). NEW YORK - Heavy populations on cabbage, cauliflower and broccoli in Monroe County. (N. Y. Wkly. Rpt.).

POTATO PSYLLID (Paratrioza cockerelli) - NEVADA - A moderate population of adults on potatoes in Smith Valley, Lyon County. (Batchelder, Gallaway, Aug. 15). WYOMING - Infestation in southeastern area virtually disappeared. No psyllids found on potatoes in the area. (Davison).

BEET LEAFHOPPER (Circulifer tenellus) - UTAH - Adults and nymphs common on potatoes in areas of Beaver, Iron and Washington Counties. (Knowlton).

A LEAFHOPPER (Empoasca filamenta) - WASHINGTON - Moderate damage to potatoes in Kittitas County. (Landis).

POTATO LEAFHOPPER (Empoasca fabae) - WISCONSIN - Nymphs and adults common at Rhinelander. In Trempealeau County untreated lima bean fields averaged 3 adults and nymphs per foot of row but none found in treated fields. (Wis. Coop. Sur.). DELAWARE - Common on potatoes and lima beans in Sussex County and prevalent on limas in New Castle County. (MacCreary, Conrad).

PEPPER WEEVIL (Anthonomus eugenii) - CALIFORNIA - Light on tomatoes in Encanto area of San Diego County. (Cal. Coop. Rpt.).

CABBAGE LOOPER (Trichoplusia ni) - NEW JERSEY - Serious on broccoli and cabbage. Some injury to foliage of tomatoes. (Ins. Dis. Newsl.). DELAWARE - Still commonly found in all areas of State but decreased somewhat on peppers, potatoes and tomatoes. Prevalent on broccoli in New Castle County and cabbages in Kent County. (MacCreary, Conrad). MARYLAND - Light to moderate on tomatoes on Eastern Shore. (U. Md., Ent. Dept.). VIRGINIA - Averaged 5-6 per leaf on cucumbers in Eastern Shore counties. (Hofmaster). WISCONSIN - Moderate numbers in Racine and Kenosha Counties. (Wis. Coop. Sur.). NEW MEXICO - Light to moderate damage to lettuce near Artesia, Eddy County. (N. M. Coop. Rpt.).

FALL ARMYWORM (Laphygma frugiperda) - VIRGINIA - Fairly heavy on cole crops in Eastern Shore counties. (Hofmaster).

IRIS WHITEFLY (Aleyrodes spiraeoides) - WASHINGTON - In moderate though increasing numbers on potatoes and many weeds near Warden, Kittitas and Quincy. (Landis). CALIFORNIA - Heavy on tomatoes in Carlsbad, San Diego County. (Cal. Coop. Rpt.).

A WHITEFLY (Trialeurodes sp.) - VIRGINIA - Heavy on collards and snap beans in Eastern Shore counties. (Hofmaster).

MEXICAN BEAN BEETLE (Epilachna varivestis) - WYOMING - Severe damage to some fields in Goshen County. Average of 9 adults per 25 sweeps and 5 larvae per 25 sweeps in some fields. Other fields with minor damage. (Davison). DELAWARE - Heavy on lima beans in parts of Sussex County. (MacCreary, Conrad). ALABAMA - Still plentiful on beans in central part of State. (Arant).

BEAN LEAF BEETLE (Cerotoma trifurcata) - VIRGINIA - Increasing on snap beans in Eastern Shore counties. (Hofmaster).

GREEN CLOVERWORM (Plathypena scabra) - NEW JERSEY - Abundant on snap and lima beans. (Ins. Dis. Newsl.). DELAWARE - Fairly common on lima beans throughout State, but a definite decrease noted. (MacCreary, Conrad).

SALT-MARSH CATERPILLAR (Estigmene acrea) - DELAWARE - Fairly common on lima beans and asparagus ferns in Sussex County. (MacCreary, Conrad).
 CALIFORNIA - Light on beans at Imperial Beach, San Diego County and medium on beans in Pleasanton area of Alameda County. (Cal. Coop. Rpt.).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - IDAHO - Moderate damage to pole beans in Franklin County. (Roberts). WASHINGTON - Moderate to severe damage to potatoes and beans near Quincy and several other areas in Columbia Basin. (Landis).

SWEETPOTATO LEAF ROLLER (Pilocrocis tripunctata) - LOUISIANA - Widespread and causing considerable damage to foliage of sweetpotatoes in Lafayette and St. Landry Parishes. (Spink).

SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons) - WISCONSIN - About 80 percent of untreated celery and some carrot fields in Kenosha-Racine area infested with aster yellows. (Wis. Coop. Sur.).

A LOOPER (Rachiplusia ou) - INDIANA - In moderate numbers in most mint fields. (Gould). DELAWARE - Larvae prevalent on carrot foliage in New Castle County. (MacCreary, Conrad).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - DELAWARE - Larvae common on asparagus ferns in various parts of the State. Feeding lightly on peppers and tomatoes in Sussex County. (MacCreary, Conrad).

GREEN PEACH APHID (Myzus persicae) - MARYLAND - A few heavy infestations on peppers in Worcester County. (U. Md., Ent. Dept.). DELAWARE - Heavy on peppers in one field in Kent County but increasing slowly on peppers and cole crops elsewhere in State. (MacCreary, Conrad).

EUROPEAN CORN BORER (Pyrausta nubilalis) - MARYLAND - Light to moderate in pepper fruits in Worcester County. (U. Md., Ent. Dept.). DELAWARE - New egg masses fairly common on peppers in central Kent County. (MacCreary, Conrad).

CUTWORMS - WASHINGTON - Often 10-12 larvae of a cutworm (probably Heliothis ploxiphaga) per plant feeding on hop cones; causing as much as 10 percent loss in some yards throughout Yakima Valley. (Klostermeyer).

SPIDER MITES - WASHINGTON - Severe damage to raspberries in Puyallup Valley. (Breakey).

A NITIDULID BEETLE (Glischrochilus sp.) - IDAHO - Damaging strawberries in Moscow area. (Portman).

TOBACCO INSECTS

GREEN PEACH APHID (Myzus persicae) - MARYLAND - General on tobacco in southern part of State. Heavy infestations not as common as in 1957. Some controls applied. (U. Md., Ent. Dept.).

HORNWORMS (Protoparce spp.) - MARYLAND - Second-brood eggs averaged 8 per 50 tobacco plants, St. Marys County. Larval damage light to moderate. (U. Md., Ent. Dept.). WISCONSIN - About 5 percent of tobacco plants in a Vernon County field were infested. (Wis. Coop. Sur.). VIRGINIA - Second-brood larvae light to medium on Pittsylvania County tobacco. Large portion of acreage has been treated. (Dominick).

TOBACCO FLEA BEETLE (*Epitrix hirtipennis*) - MARYLAND - More abundant on tobacco than usual. Treatment applied to some fields near Upper Marlboro. (U. Md., Ent. Dept.). VIRGINIA - Decreased on tobacco in Pittsylvania County. (Dominick).

COTTON INSECTS

BOLL WEEVIL (*Anthonomus grandis*) - SOUTH CAROLINA - Migration general in Coastal Plain, August 19. Most squares and many young bolls being punctured in unprotected cotton. (Cott. Lett.). TENNESSEE - Average of 24 percent infestation in 12 western counties compared with average of 51 percent a year ago. Migration from older fields occurring. Generations overlapping. (Locke). ALABAMA - Infestations continue to increase in all areas. Migrations also continue to increase. (Rawson, Grimes). MISSISSIPPI - General infestation still extremely low in delta counties. Third-generation weevils emerging over area; some fields infested for the first time. (Merkl et al.). LOUISIANA - Infestations averaged 32 percent in 21 fields in Avoyelles Parish and 13 in 94 fields in Rapides Parish. Averages ran from 14 to 34 percent in Grant, Richland, Ouachita and Morehouse Parishes. (Spink). Twelve percent infestation in 129 fields in Madison Parish. Newly hatched weevils noted in blooms. Infestations increasing rapidly following rains. Treatment will be needed in many fields until October. (Smith et al.). ARKANSAS - Third-generation weevils emerging. Generations overlapping. Square counts high because of scarcity of squares. (Ark. Ins. Rpt.). OKLAHOMA - Caused moderate to heavy damage to late squares in south central, southeastern and east central areas. Most fields showed 30-65 percent of squares punctured. General light damage in southeastern counties. (Coppock). TEXAS - Heavy in sections of central, northeast and north central areas. (Gaines).

BOLLWORMS (*Heliothis* spp. et al.) - SOUTH CAROLINA - Injury continued to increase as populations built up. Worst buildup in several years. (Cott. Lett.). TENNESSEE - Counts averaged 0-11 larvae and eggs 0-8 per 100 terminals. All larval stages in most fields with considerable damage being done. (Locke). MISSISSIPPI - Activity slow in delta counties. Heavy egg deposition expected during next 7 days. (Merkl et al.). ALABAMA - Heavy on cotton in northern part of State, especially in irrigated fields. All larval stages present. In some fields 75 percent of terminals showed some damage. Eggs scarce, but adults swarming from corn beginning to dry up will keep infestations high if controls are not applied. (Rawson, Grimes). LOUISIANA - Infestation averaged 4 percent in 21 Avoyelles Parish fields, 9.5 percent in 94 Rapides Parish fields, 10 percent in 40 Grant Parish fields, 2.9 percent in 12 Richland Parish fields, 5 percent in 90 Ouachita Parish fields and 2.3 percent in 152 fields in Morehouse Parish. (Spink). Square infestation averaged 7 percent in 145 fields of 147 inspected in Madison Parish. Commercial damage in many fields. Considerable boll damage in some fields. Eggs averaged 8.5 and larvae 1.47 per 100 terminals in 103 fields examined. Eggs were found in 100 of the examined fields and larvae in 60. Eggs and small larvae less numerous than for past 14 days. (Smith et al.). ARKANSAS - Moths emerged in large numbers, eggs being laid on cotton. Egg and larval counts rose sharply in many fields scouted. Eggs deposited in terminals, on stems, in and on blooms and square bracts. (Ark. Ins. Rpt.). OKLAHOMA - Infestations averaged 5-15 percent in Cotton, Tillman and Grady Counties. (Bryan). TEXAS - Generally light, but heavy in several counties in south plains area. (Gaines). NEW MEXICO - Moderate infestations in Lea County appeared to be subsiding. Occasional light to moderate infestations on cotton, Eddy, Lea and Chaves Counties. Damage light in most areas. (N. M. Coop. Rpt.). ARIZONA - Large numbers of moths in all fields examined. Larvae building up in some localities. (Bottger, Kauffman, Sheets).

PINK BOLLWORM (Pectinophora gossypiella) - MEXICO - In State of Tamaulipas inspection of 327 bushels of trash involving 2,501 bales of cotton revealed 44,061 larvae. Inspection of 82 bushels of gin trash at Victoria was negative. Thirty-two lint cleaner inspections involving 104 bales in Matamoros district detected 310 larvae. Bloom inspection in the Delicias, Chihuahua, district indicated a 2 percent infestation. No appreciable pink bollworm damage reported from the Juarez district. Few larvae noted from lint cleaner inspections of 2 gins in Monterey, Nuevo Leon. Inspection of 47,370 blooms on 950 acres at Caborca, Sonora, was negative. Gin trash inspection was terminated in the Culiacan zone of the Sinaloa district, with negative results obtained from inspection of 622 bushels of trash. Negative results were also obtained from 32 lint cleaner inspections of 3 operating gins. Inspections were made of 8,141 braceros and their baggage at the Benjamin Hill railroad station, Sonora. Interception of contaminated trucks increased at the Mazatlan and Terreros road stations in Sinaloa. (PPC, Mex. Reg., July Rpt.).

ARIZONA - Specimens taken from a field in southwestern Maricopa County were determined positive. Subsequent surveys of other cotton fields in the Gila River Valley between Gila Bend and Gillespie Dam disclosed 4 more fields to be lightly infested. Gin trash examinations disclosed an infestation in the Rainbow Valley. Three fields had been found infested in this area by the close of the month. About 4,000 acres of cotton in the Gila River Valley and 3,500 acres in the Rainbow Valley are involved. (PPC, West. Reg., July Rpt.).

TEXAS - Bloom, lint cleaner and boll inspections were rather general. Although there were some rather heavy spots of infestation in the lower valley, the infestation did not appear to be too general. The El Paso infestation appeared somewhat higher than in 1957. (PPC, So. Reg., July Rpt.).

COTTON LEAFWORM (Alabama argillacea) - NEW MEXICO - Occasional larva found in cotton fields in Chaves and Eddy Counties. (N. M. Coop. Rpt.). **TEXAS** - Light in west central and northwest areas. (Gaines).

GARDEN WEBWORM (Loxostege similalis) - TENNESSEE - Caused damage in scattered fields. (Locke).

SALT-MARSH CATERPILLAR (Estigmene acrea) - ARIZONA - Mostly light, but building up in spots. (Bottger, Kauffman, Sheets).

LOOPERS - ARKANSAS - Trichoplusia ni in some cotton fields. (Ark. Ins. Rpt.).

MISSISSIPPI - First report of cabbage loopers in cotton in Stoneville area this season. (Merkel et al.). **OKLAHOMA** - Infestations of T. ni low, some defoliation in ranker cotton. (Bryan). **NEW MEXICO** - Light to heavy infestations of T. ni damaged cotton in Chaves and Eddy Counties. (N. M. Coop. Rpt.).

ARIZONA - Appeared to be controlled by virus in many areas. However, large numbers of eggs and moths again present in many fields. (Bottger, Kauffman, Sheets).

COTTON LEAF PERFORATOR (Bucculatrix thurberiella) - CALIFORNIA - Heavy on some cotton in the Blythe area of Riverside County. (Cal. Coop. Rpt.). **ARIZONA** - Building up in most areas. (Bottger, Kauffman, Sheets).

A CHRYSOMELID BEETLE - NEW MEXICO - Damaged cotton in a few Chaves County fields. (N. M. Coop. Rpt.).

APHIDS - SOUTH CAROLINA - Problem in only 2 Piedmont counties. (Cott. Lett.).

TENNESSEE - Retarding growth in some fields in western part of State. Most infestations in late cotton. (Locke). **ALABAMA** - Aphis gossypii moderate on cotton in northern portion of State. (Grimes). **MISSISSIPPI** - Light to medium and common in untreated fields in delta counties. (Merkel et al.).

LOUISIANA - Generally light in Madison Parish area as phosphorus insecticides are in general use. (Smith et al.). **OKLAHOMA** - Populations low. (Bryan).

TEXAS - Increased in south plains area. (Gaines). **ARKANSAS** - Increased in a number of fields. (Ark. Ins. Rpt.).

FLEAHOPPERS - TEXAS - Heavy in Briscoe and Cottle Counties. (Gaines).
OKLAHOMA - Varied 20-30 per 100 terminals. (Bryan).

LYGUS BUGS (Lygus spp.) - CALIFORNIA - Nymphs increased rapidly in Burrel-Helm area of Fresno County and in some fields in Tulare County. Caused poor set of bolls. Nymphs and adults increased in the Arvin-Rosedale-Shafter areas of Kern County. (Ruud, Leigh, Beards, Ext. Serv.). ARIZONA - Nymphs and adults averaged 2-8 per 100 sweeps in Graham County cotton fields. (Woodruff, Aug. 4). Generally decreased, but as many as 10-20 per 100 sweeps taken in some fields. (Bottger, Kauffman, Sheets).

A PLANT BUG (Largus cinctus) - ARIZONA - Becoming numerous in many Maricopa County fields, with 25 per 100 sweeps reported in some fields. (Bottger, Kauffman, Sheets).

STINK BUGS - ARIZONA - Averaged 8-16 per 100 sweeps in Graham County cotton fields. (Woodruff, Aug 4). Mostly Chlorochroa sayi averaged up to 4 per 100 sweeps in some fields in Buckeye area. Remained light in Pima County. (Bottger, Kauffman, Sheets). NEW MEXICO - Caused minor damage to cotton in Lea and Quay Counties. (N. M. Coop. Rpt.).

WHITEFLIES - ARKANSAS - Present in a number of fields, but caused no appreciable damage. (Ark. Ins. Rpt.). ALABAMA - Limited numbers of nymphs in cotton in northern areas, decreased over previous week. (Grimes). CALIFORNIA - Abundant in many Tulare County fields. Considerable biological control noted. (Leigh, Beards, Ext. Serv.).

SPIDER MITES - SOUTH CAROLINA - Appeared for first time this season in many Piedmont fields. General throughout remainder of State. (Cott. Lett.). TENNESSEE - Continued to cause severe damage over cotton growing area of State. Control good in most cases, but applied too late to prevent considerable damage. Spreading to soybeans in Lake County. Caused complete defoliation and boll drop in many cases where heavy. Lighter infestations forcing cotton to mature early. (Locke). ARKANSAS - Continued a major pest of cotton in northeast area, numerous in several other areas. (Ark. Ins. Rpt.). ALABAMA - Extremely heavy in northern section. One of worst infestations to occur in this area. Tetranychus telarius dominant species. (Rawson, Grimes). MISSISSIPPI - Light to medium and common in untreated delta county fields. (Merkel et al.). OKLAHOMA - Populations low. (Bryan). NEW MEXICO - T. cinnabarinus light in Eddy and Chaves Counties, caused light damage to cotton. Appeared to be spreading somewhat in Carlsbad and Artesia areas. (N. M. Coop. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

FALL WEBWORM (Hyphantria cunea) - COLORADO - Heavy infestation in mountain canyons in Larimer, Boulder, Jefferson, Douglas, El Paso and Fremont Counties. Control applied in some areas. (Exp. Sta.). WASHINGTON - Slight damage to deciduous trees in Pierce County, appearing much earlier than usual this year. (Breakey). OREGON - Very abundant on untreated walnut, apple, filbert and fruit trees. (Capizzi). ILLINOIS - Nests common throughout State. (Ill. Ins. Rpt.). PENNSYLVANIA - Abundant on deciduous trees in Chester County, August 13. (Sleesman).

GYPSY MOTH (Porthetria dispar) - In NEW YORK, two confirmed catches of male moths were reported, one in the town of Putnam Valley, Putnam County, on July 18 and one in the town of Unionville, Dutchess County, on July 25. Both catches are within the areas sprayed in 1957. (PPC, East. Reg., July Rpt.).

A LEAF TIER (Fascista cercerisella) - OKLAHOMA - Serious infestation on red-bud throughout northern portion of State, 30-70 percent of leaves of unprotected trees infested. (Howell).

YELLOW-NECKED CATERPILLAR (Datana ministra) - INDIANA - Colonies very common on crab apple, birch and pin oak throughout State. (Schuder).

A LEAF MINER (Cameraria sp.) - NORTH CAROLINA - In residential area 100 percent of trees affected on 10-15 acres in Beaufort County. Light injury to chestnut oak in Randolph County. (Chesnutt, Farrier).

BIRCH LEAF MINER (Fenusa pusilla) - INDIANA - Common in native white birch in Pulaski County. (Schuder).

PINE SAWFLIES - WISCONSIN - Larvae of Neodiprion pinetum feeding on Dane and Jefferson County white pine. (Wis. Coop. Sur.). VIRGINIA - Active on scattered loblolly and Virginia pines in young plantations and natural growth in Fauquier, Albemarle and Spotsylvania Counties. Damage slight through July. (Va. Div. For.).

IPS BEETLES - TEXAS - Occasional single pines or groups of pines died from Ips infestation throughout eastern area. The damage is much less extensive than in previous years. (Young).

TURPENTINE BEETLES - TEXAS - Mortality of saw-timber-size pines continues throughout southeastern area particularly in Hardin, Jasper and Liberty Counties. (Young).

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - TEXAS - Fewer newly infested spots with brood trees found in Hardin County than in previous months. All known infested spots either had control completed or work is now in progress. (Young). VIRGINIA - Active in a single new small spot in King William County. (Va. Div. For., July).

SYCAMORE LACE BUG (Corythucha ciliata) - OKLAHOMA - Heavy on sycamore in Lake Wister area of LeFlore County. Moderate-heavy feeding damage. (Coppock).

SCALE INSECTS - IDAHO - Pulvinaria innumerabilis moderate to severe on maples in Twin Falls. (Gibson). CALIFORNIA - Heavy infestation of Chionaspis quercus on oaks in Yucaipa, San Bernardino County. (Cal. Coop. Rpt.).

MITES - NEVADA - Heavy infestation of an eriophyid mite on leaves of ash in Reno, Washoe County. (Bechtel, Aug. 15). CALIFORNIA - Medium infestation of Tetranychus pacificus on walnut trees in Red Bluff, Tehama County. (Cal. Coop. Rpt.).

A MIDGE (Retinodiplosis sp.) - CALIFORNIA - Reported as seriously damaging ponderosa pines in the Mt. Shasta-Brushfield areas by tip killing or deforming about 100 acres in a 600-acre stand. (Averell, USFS).

ELM LEAF BEETLE (Galerucella xanthomelaena) - IDAHO - Fully mature larvae moving down trunks of elms preparatory to pupation at Twin Falls. (Gibson). CALIFORNIA - Defoliating elms. Medium infestation at San Andreas, Calaveras County, and light populations at Avenal, Kings County. (Cal. Coop. Rpt.). OREGON - Second-generation adults appearing in Willamette Valley week of August 17. (Capizzi). OKLAHOMA - Very heavy populations remain on Chinese elm in Stillwater area. (Drew).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - WISCONSIN - Continues to be numerous in counties where Dutch elm disease exists. As of August 20, a total of 1624 cases of the disease found. (Wis. Coop. Sur.).

MIMOSA WEBWORM (Homadula albizziae) - MARYLAND - Moderate to heavy on honeylocust at Chestertown and on mimosa at Lanham. (U. Md., Ent. Dept.). MISSISSIPPI - Light to moderate damage to mimosa trees over State. (Hutchins). PENNSYLVANIA - Very abundant and damaging honeylocust in Chester, Lancaster and Dauphin Counties. (Slesman).

A GALL INSECT (Dasyneura gleditschiae) - OHIO - Galls occur on the new leaves of thousands of thornless honeylocust trees in Lake County. (R. B. Neiswander).

CATALPA SPHINX (Ceratonia catalpae) - INDIANA - Larvae abundant in Pulaski and Fulton Counties. Catalpa trees stripped of foliage. (Schuder). ILLINOIS - Severely defoliated many catalpa trees in southeast. (Ill. Ins. Rpt.).

BAGWORM (Thyridopteryx ephemeraeformis) - NEW YORK - Very heavy on arborvitae. (N. Y. Wkly. Rpt.). NORTH CAROLINA - Larvae defoliating cedar tree and rose bushes in Lee County. (Farrier). VIRGINIA - Heavy on cedars and arborvitae in Roanoke City and in one area of Nansemond County. (Rowell).

AN AZALEA CATERPILLAR (Datana major) - ALABAMA - Heavy defoliation of azaleas in Mobile County. (Lockhart, Seibels).

APHIDS - COLORADO - Noticeable increase in populations on ornamentals and shade trees in Larimer County. Abundance of Myzocallis ulmifolii and other aphids in Fort Collins area. (Ext. Serv., Exp. Sta.).

WHITE-LINED SPHINX (Celerio lineata) - OREGON - Abundant and damaging fuchsia in Corvallis. (Krantz).

WHITEFLIES - LOUISIANA - Heavily infesting ligustrum in East Baton Rouge Parish. (Spink).

UGLY-NEST CATERPILLAR (Archips cerasivorana) - CALIFORNIA - Occurred in heavy populations damaging several acres of chokecherries in McCloud area of Siskiyou County. (Hall, USFS).

INSECTS AFFECTING MAN AND ANIMALS

HORN FLY (Siphona irritans) - IDAHO - Abundant in Franklin County with moderate infestations of cattle and horses. (Roberts). ALABAMA - Populations high on cattle in most areas of State. (Grimes). OKLAHOMA - Populations appreciably higher on dairy cattle in north central area. (Howell).

FLIES - UTAH - House flies generally numerous in Piute County. (Knowlton).
 WISCONSIN - Heavy fly populations reported from Chippewa, Pepin, Wood, Dane, Waukesha and Jackson Counties. (Wis. Coop. Sur.). OKLAHOMA - House fly and stable fly populations appreciably higher on dairy cattle in north central area. (Howell).

FLEAS (*Ctenocephalides* spp.) - RHODE ISLAND - *C. felis* and *C. canis* abundant and troublesome in East Providence, Smithfield and Cranston. (Mathewson).

TICKS - NORTH CAROLINA - Three cases of tick paralysis of dogs in July. (Cooperrider).

STORED-PRODUCT INSECTS

ANGOUMOIS GRAIN MOTH (*Sitotroga cerealella*) - MARYLAND - Heavy moth emergence noted from large corn crib at Chestertown. (U. Md., Ent. Dept.).

A FLOUR BEETLE (*Gnathocerus maxillosus*) - MARYLAND - Apparently this species, abundant in refuse oats at mill in Chestertown. (U. Md., Ent. Dept.).

GRANARY WEEVIL (*Sitophilus granarius*) - MARYLAND - Abundant in refuse oats in basement of mill in Chestertown. (U. Md., Ent. Dept.).

KHAPRA BEETLE (*Trogoderma granarium*) - MEXICO - Three new infestations of ranch properties were discovered, one 8 miles south of Mexicali in Colonia Ahumada and two east of Mexicali in Colonia Abasolo, in the State of Baja California. A total of 209 properties were inspected, 109 being initial and 100 being repeat inspections, with a total of 74 specimens submitted for identification. Fumigation was completed on 4 properties comprising a total of 129,579 cubic feet. (PPC, Mex. Reg., July Rpt.). ARIZONA - Two infestations were found in Yuma County, one was new representing an estimated 300,000 cubic feet and one was a reinfestation involving 900,000 cubic feet. (PPC, West. Reg., July Rpt.).

BENEFICIAL INSECTS

PARASITES AND PREDATORS - IDAHO - Nabids averaged 1-7 per sweep in red clover fields in southwest section of State. *Typhlodromus cucumeris* effectively controlled two-spotted spider mite populations in several Canyon County red clover fields. (Waters). ILLINOIS - Averages per 100 sweeps in clover and alfalfa fields in northeast and southeast sections respectively were lady beetle larvae, 0 and 10; lady beetle adults, 3 and 8; Neuroptera larvae, 3 and 3; and damsel bugs, 54 and 48. (Ill. Ins. Rpt.). OKLAHOMA - Lady beetles averaged 12-20 per 10 sweeps in alfalfa in McClain, Murray and Garvin Counties. Lower elsewhere. (Coppock).

A WASP (*Scolia dubia*) - NORTH CAROLINA - Flying over lawns in large numbers in Guilford and Alamance Counties. (Hodgin, Coble, Farrier). VIRGINIA - Abundant in the Richmond area. (Matheny).

MISCELLANEOUS INSECTS

EUROPEAN EARWIG (*Forficula auricularia*) - MASSACHUSETTS - Numbers decreasing. (Wheeler, Aug. 18). IDAHO - Continued to be nuisance to homeowners in Twin Falls area. (Gibson). Abundant in gardens in Preston. (Roberts).

JAPANESE BEETLE (*Popillia japonica*) - INDIANA - Emergence later than usual. Population in Newton County area is one-third to one-fourth that of 1957. (Gould). MASSACHUSETTS - Still way below normal but most numerous now. (Whitcomb, Garland, Aug. 15). ILLINOIS - A new infestation in south Chicago may include an area of 9 square miles. A few beetles were trapped in East St. Louis and 3 male beetles were found for the first time in East Peoria. INDIANA - Beetles were found for the first time in Lafayette, Osceola and Huntington. IOWA - At Ft. Madison 4 beetles were trapped north and one west of area treated during March, 1958. Late in the month a single beetle was caught 2 blocks outside the northeastern part of the treated area. KENTUCKY - The center of the Pike County infestation is now believed to be 2 miles west of Meta and extending in a 7 or 8-mile radius. MICHIGAN - A single beetle was found in Grand Rapids, the first since 1957. In Detroit, 39 beetles were trapped. One was trapped at Niles on July 24, the first since 1955. MISSOURI - Beetles were caught in the St. Louis area, and 7 locations within the northeastern portion of the city are involved. OHIO - The Chillicothe infestation extends about 2 miles into rural areas. First infestations were found at Dansville, McArthur, Greenfield, Milan and new suburban towns of Cincinnati. The 1957 Killbuck infestation now extends 10 miles from that city. Beetles have been found in several locations along the river from Ironton to the regulated area in Gallia County. The above areas are outside the Ohio regulated area. (PPC, Cent. Reg., July Rpt.). WEST VIRGINIA - Beetles were trapped in Oak Hill heretofore considered non-infested. Beetles were also found outside the regulated area by scouting in Monroe, Jackson and Mason Counties, indicating extension of infestation in these counties. (PPC, East. Reg., July Rpt.). FLORIDA - One adult was trapped at the International Airport at Tampa, Hillsborough County. Additional trapping revealed no further specimens by the close of the month. In GEORGIA, 1,440 additional acres were found infested in the city of Augusta. Beetles were reported for the first time in Aiken and Marlboro Counties, SOUTH CAROLINA, and in Surry County, NORTH CAROLINA. TENNESSEE - Trapping was intensified after beetles were found in city of Knoxville, and a new infested location was found in southern Johnson County. (PPC, So. Reg., July Rpt.).

A THIEF ANT (*Solenopsis* sp.) - DELAWARE - Large swarms of males and females August 12, New Castle County. (Bray).

A WEEVIL (*Calomycterus setarius*) - MASSACHUSETTS - Caused annoyance in homes. (Wheeler, Aug. 18).

YELLOW JACKETS - MASSACHUSETTS - Attracting much attention, about 25 reports during week. (Whitcomb, Garland, Aug. 15).

CORRECTION

CEIR 8(33) : 730 - ARMYWORM light trap collections are from WISCONSIN.

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Protoparce sexta	quinq.	Heliothis zea	vires.
ALABAMA									
Crossville 8/17	4	4					12	130	
ARKANSAS									
Fayetteville 8/14-20	48	34		6	107			65	
Hope 8/14-20	6	5			2			25	
Kelso 8/14-20	1	9		2	11			33	
FLORIDA									
Gainesville 8/19						6		18	
Monticello 8/13,19						2		4	
Quincy 8/11						46		112	19
ILLINOIS									
Urbana 8/15-21	128	55	10	101	3			54	
INDIANA(Counties)									
Orange 8/12-19	41	29	10	17		69	59	5	
Tippecanoe 8/14-20	72	35	14	76	15		1	26	
LOUISIANA									
Baton Rouge 8/15-21	7	8	42		1307			115	
MISSISSIPPI									
Grenada 8/11-16	9	3	1					3	
Senatobia 8/8-14		3			3			2	
State College 8/16-22	54	82	37		106			137	1
*Stoneville 8/15-21	73	31	30		163	26		143	9
NEBRASKA									
Alliance 8/4-12	75	10		204		1	1	15	2
Kearney 8/4-7	30	3		38		3	7	32	
Lincoln 8/9-14	102	233		7				69	
North Platte 8/8-14	102	34		112	12	5	6	44	4
Scotts Bluff 8/5-18	81	13		274			11	16	
NORTH CAROLINA									
Clayton 8/15-21	53	55	93			16	1	107	5
Faison 8/15-21	52	28	76			44	5	198	4
SOUTH CAROLINA									
Charleston 8/18-24	12	1	46		144	37	1	306	2
Clemson 8/16-22	253	182	151	22	24	20	2	72	
Florence 8/17-23	450	120	1416	28	554	340	8	5192	174
TENNESSEE(Counties)									
Blount 8/12-18	40	124	200	8	20		12	116	
Cumberland 8/12-18	52	26	10	12		13	40	16	
Greene 8/12-18	96	52	100	20		40	88	32	
Johnson 8/12-18	284	144	258	112	6		2	28	
Maury 8/12-18	62	42	62	2		12	42	20	
Robertson 8/12-18	72	96	78	6		3	20	78	
TEXAS									
Waco 8/16-22	54		50	61				1556	7
VIRGINIA(County)									
Pittsylvania 8/10-16						88	198		

*Four traps - Stoneville

LIGHT TRAP COLLECTIONS - Continued

CORN EARWORM (*Heliothis zea*) - WISCONSIN - 8/12-19; *Arlington - 1; Astico - 1; Janesville - 7; LaCrosse - 2; Middleton - 1; Platteville - 1; Ripon - 2; Rosendale - 10.

WEBWORMS (*Loxostege* spp.) - NEBRASKA - Alliance (8/4-12) - 117,844; Kearney (8/4-7) - 158; Lincoln (8/9-14) - 7,164; North Platte (8/8-14) - 1,589; Scotts Bluff (8/5-18) - 1,233.

*Two traps - Arlington

ADDITIONAL NOTES

MICHIGAN - RED-BANDED LEAF ROLLER appearing in Coloma area, however third-instar larvae constitute bulk of population. CODLING MOTH adults of summer brood emerged in Beulah-Traverse City area August 8. PLUM CURCULIO adults emerged in Benton Harbor, South Haven and Grand Rapids. EUROPEAN RED MITE increased until August 20 in area from Benton Harbor to Grand Rapids. (Hutson).

NEW YORK - CORN EARWORM and EUROPEAN CORN BORER injury in Hudson Valley corn comparatively low. Hatching of second-brood European corn borer increased and corn earworm hatched in substantial numbers. RED-BANDED LEAF ROLLER activity increased in Orleans County, second brood appeared generally in Monroe County. EUROPEAN RED MITE remained active in Orleans County, continued troublesome in Monroe County. TWO-SPOTTED SPIDER MITE appeared in several areas of the same county. (N. Y. Wkly. Rpt.).

OKLAHOMA - SPOTTED ALFALFA APHID light generally in central and eastern areas. Averaged 300-400 per 10 sweeps in one Murray County alfalfa field. (Walton, Coppock). Range populations of GRASSHOPPERS generally light, 1-6 per square yard, in south central and eastern counties. Light to moderate, 2-12 per square yard, along roadsides and field margins in same areas. Scattered marginal damage occurred to cotton, sorghums, soybeans and alfalfa. Melanoplus spp. ranged 2-10 per square yard. Caused appreciable damage to seed heads of switchgrass in Tillman County. (Bryan). CORN EARWORM increased in Garvin and Murray County alfalfa, with 4-10 per 10 sweeps. Most larvae in early instars. Light to moderate damage occurred to grain sorghum heads in scattered areas of southern counties. (Coppock). Averaged 20-30 per 100 terminals in peanuts in Payne and Caddo Counties. (Walton, Arbuthnot). SOUTHWESTERN CORN BORER averaged 2 second-generation larvae per stalk of field corn in Payne, Caddo and Oklahoma Counties. CORN LEAF APHID populations very low. FALL ARMYWORM light; 1-2 per stalk. EUROPEAN CORN BORER very low, but increased over 1957. (Walton, Arbuthnot). WEBWORMS light, scattered in alfalfa in southern and eastern counties. RAPID PLANT BUG averaged 3-5 per 10 sweeps in McClain County alfalfa. THREE-CORNERED ALFALFA HOPPER abundant in most alfalfa fields throughout State, 5-30 per 10 sweeps. (Coppock). RED-NECKED PEANUTWORM averaged 20 per 100 terminals in Payne and Caddo County peanuts. (Walton, Arbuthnot).

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UNITED STATES DEPARTMENT OF AGRICULTURE

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PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearinghouse and does not assume responsibility for accuracy of the material.

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United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

EUROPEAN CORN BORER infestations high in South Dakota and Kansas. Egg mass counts high in southeast Missouri. (p. 777). CORN EARWORM in damaging numbers in parts of Alabama. Infestation increased over 1957 in mid-Willamette Valley, Oregon. (p. 778). FALL ARMYWORM damaging in some eastern states. (p. 778).

HESSIAN FLY surveys in Nebraska and Missouri. (p. 779).

PEA APHID increased in Maryland and Delaware alfalfa, abundant in northern Nevada and counts high in areas of Colorado. (p. 780). SPOTTED ALFALFA APHID counts high in Mesa County, Colorado. (p. 780).

ORIENTAL FRUIT MOTH damage noted for first time in Willamette Valley, Oregon. (p. 782). BLACK PECAN APHID heavy on pecans throughout Louisiana, found for first time in California. (p. 782).

BEET ARMYWORM heavy on peas in California, damaging in Oregon and severe on sugar beets in Arizona. (p. 783). A WEEVIL new to Delaware. (p. 784).

BOLL WEEVIL infestations increasing in several southern states, migrations underway. (p. 784). BOLLWORM populations and damage increasing in several cotton-growing states. (p. 785). SPIDER MITE infestations spread in North Carolina, continue serious in Tennessee and Alabama.

A SAWFLY infesting 20,000 acres of pine in Florida. (p. 786). MIMOSA WEBWORM collected for first time in Florida. (p. 789).

CAT FLEAS prevalent in many California localities and more abundant than usual in Oregon. (p. 790).

Distribution of a JAPANESE WEEVIL. This map replaces one issued in CEIR 8(20) : 391. Record for WASHINGTON was in error. (p. 787).

WEATHER BUREAU 30-DAY OUTLOOK

SEPTEMBER 1958

The Weather Bureau's 30-day outlook for September calls for temperatures to average below seasonal normals in the Great Lakes Region and also in the Middle and Lower Mississippi Valley. Above normal temperatures are predicted from the Southern and Central Plains westward to the Pacific Coast, with warmest weather in the Southwest. In the remainder of the country temperatures should average near normal. Rainfall is expected to exceed normal in the Great Lakes Region and in the Southeast. Subnormal amounts are anticipated in the western half of the nation except near normal in the Pacific Northwest. In areas not specified about average amounts are indicated.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 a half year.

WEATHER OF THE WEEK ENDING SEPTEMBER 1, 1958

Hurricanes highlighted the week's weather news. Daisy, about 280 miles east of Melbourne, Florida, at 5 a.m., August 26, pursued a northerly off-shore course with her center passing less than 100 miles off the southeastern Massachusetts Coast as she curved out over the Atlantic during the forenoon of the 29th. Daisy produced 3.48 inches of rain in 24 hours and wind gusts up to 55 miles per hour on Nantucket Island. Ella, a tropical storm in the northeastern Caribbean, on August 30, had become a hurricane by noon of the 31st when centered about 200 miles southeast of San Juan, Puerto Rico. Ella lost hurricane intensity in the vicinity of Cuba on September 2 and was expected to cross the western end of that island in a northwesterly course on the 3rd.

West of the Continental Divide the week's weather was mostly fair with slightly above normal temperatures. In Washington and Oregon east of the Cascades, maximum temperatures ranged from the middle 90's to well over 100 degrees early in the week. The hot, dry weather maintained a high forest-fire hazard. Oregon reported scores of fires with three reaching significant proportions before being brought under control. Two-inch hail was reported near Sandpoint, Idaho, on the 29th and a severe hail storm was reported to have destroyed 7 square miles of crop, mostly grain and alfalfa, in west central Wyoming. East of the Divide mostly sunny weather and near normal temperatures were favorable for crop maturity. Rainfall exceeding an inch was limited mostly to sections along the Gulf and Atlantic Coast and upper portions of the Mississippi Valley and Great Lakes Region. Little or no rain fell in the lower Great Plains or the Ohio and lower Mississippi Valleys. Moisture is needed in some sections of the western and northern Great Plains where last week's showers that did occur were very light.

During a cold snap in northern areas at the beginning of the week, temperatures fell to freezing locally in lowland areas of Wisconsin but caused only a few losses. A cold spell occurred in the Northeast again at the end of the period, and September began at many stations in the Great Lakes Region with maximum temperatures in the 50's and 60's and minima in the 30's and 40's. Several hail storms occurred in Minnesota during the week, one in Pemberton and vicinity on the 29th damaging crops and windows to the extent of \$50,000. Hail storms were also reported in Buffalo and Elmira, New York, on August 31. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - DELAWARE - Melanoplus femur-rubrum common in central Kent County alfalfa. (MacCreary, Conrad). LOUISIANA - Conocephalus fasciatus averaged 200-300 per 100 sweeps in rice fields, Vermilion Parish. (Spink). WISCONSIN - Development slowed considerably by cool weather. Nymphs of M. femur-rubrum expected to mature and adults to continue to feed on forage. Egg laying not noted, but should begin soon where adult numbers are very high in Waupaca and Portage Counties and other lighter soil areas. Large numbers of second and third-instar nymphs, few adults in Wood County. Grasshopper numbers quite high in Juneau and Adams Counties. Less than 10 per square yard in eastern and southern counties, higher in few scattered fields. In western Dane County M. bilituratus and M. differentialis adults comprised minor portion of population. Based on observations thus far, incidence of parasitic nematodes appeared somewhat less than in 1957. (Wis. Coop. Sur.). NEBRASKA - Adult survey completed and indicates trend of westward movement. Infested areas are generally southwestern two-thirds of State with heaviest populations along southern edge, bordered on north by North Platte River. Much of this area fell under influence of migratory flights of M. bilituratus from mid-June to mid-July and will be kept under observation for development of second generation which is now hatching. Peak now passed and infestation on decline. Dominant cropland species were M. differentialis, M. bivittatus, M. foedus, M. femur-rubrum and Aeoloplides turnbulli. Dominant rangeland species were Ageneotettix deorum, Trachyrhachis kiowa, Aulocara ellioti, Melanoplus bilituratus, M. foedus, M. occidentalis and M. angustipennis. (Bell). KANSAS - Non-economic to light infestations found during summer adult survey in 7 east central and 7 northeast counties. M. femur-rubrum dominant, with few M. differentialis and M. bilituratus. Latter species mostly third and fourth-instar nymphs. Evidence of earlier fungus disease noticeable in most fields. (Matthew). OKLAHOMA - Numbers light, however heavier than in 1957 in northeastern and east central counties. Averaged 4-10 per square yard along roadsides and margins, 2-6 on range. (Coppock). UTAH - Egg laying continued in scattered localities. Trimerotropis pallidipennis population decreased in Washington, Iron and Kane Counties. (Knowlton). OREGON - Populations, predominantly Melanoplus spp., lower in Willamette Valley than in several years. From survey reports of USDA personnel, this condition of reduced grasshopper populations exists throughout Oregon. (Every). CALIFORNIA - Dissosteira spurcata medium on dry pastures in Montpelier area, Stanislaus County. M. devastator medium in dry mountain pastures in Copperopolis area, Calaveras County. Schistocerca sp. heavy on brush in Julian area, San Diego County. (Cal. Coop. Rpt.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - NEW JERSEY - Second-brood larvae quite active but not generally heavy. Late plantings of field corn damaged. Some young larvae entering tips of ears. (Ins. Dis. Newsl.). DELAWARE - Third and fourth-instar larvae very common in field corn ears, Kent and Sussex Counties. Egg laying continued, decrease noted. (MacCreary, Conrad). MARYLAND - Larvae caused light to moderate damage to ears and stalks of sweet corn on Eastern Shore. (U. Md., Ent. Dept.). WISCONSIN - Second-brood moth flight continued. (Wis. Coop. Sur.). SOUTH DAKOTA - Infestation averaged 76 percent in southeast district with 288 larvae per 100 plants. Second-brood larvae in first and second instars. In south central district averaged 54 percent infestation with 130 larvae per 100 plants. Eggs of second brood noted, fifth-instar larvae predominant. (Hantsbarger, Klix). KANSAS - Larvae found in nearly all corn fields examined in 7 east central and 7 northeast counties. Stalk infestation ranged 4-100 percent. Infestations of second-brood larvae only, ranged 0-60 percent of stalks. Larvae per infested stalk ranged 1-11. Larvae found inside stalks in several grain sorghum fields in east central area. (Matthew). MISSOURI - Egg mass counts ranged 20-200 per 100 stalks with approximately 55-60 percent of second-brood larvae pupated or emerged in southeast area. Egg laying completed in central area. (Peters, Jackson, Munson). ARKANSAS - Populations on corn variable throughout State.

Heavy in field of grain sorghum in Phillips County, with 25 percent of heads broken over. (Ark. Ins. Rpt.).

CORN EARWORM (*Heliothis zea*) - NEW JERSEY - Moth flights not heavy at trap locations in Burlington County. Heaviest flights of season occurred first 2 weeks of August. (Ins. Dis. Newsl.). DELAWARE - Small larvae common in field corn ears in Kent County, decreased in Sussex County. Small larvae in Sussex County alfalfa. (MacCreary, Conrad). MARYLAND - Increased in ears of sweet and field corn in all sections. Expected to be severe in late corn. Light on soybean pods in Worcester County. (U. Md., Ent. Dept.). NORTH CAROLINA - Caused light damage to peanuts in Pender County. (Scott, Farrier). Up to 7 percent of whorls of field corn damaged in Iredell County in 1958, being heaviest damage in recent years. (Franklin). ALABAMA - Damaging numbers present in grain sorghum in central and northern parts of State. (Hays). WISCONSIN - Moth flight increased in spite of cool weather. (Wis. Coop. Sur.). ARKANSAS - Larvae averaged 0-2 per head in grain sorghum in Jackson, northern Mississippi and Poinsett County fields checked. (Ark. Ins. Rpt.). MISSOURI - Larvae ranged 0-60 per 100 heads of grain sorghums in south central and south-east areas. (Kyd, Thomas). KANSAS - Found in most grain sorghum fields examined. Infestation ranged 0-80 percent, with 1-3 larvae per infested head. Control ruled out in nearly all examined fields because of size of feeding larvae and advanced maturity of grain. (Matthew). TEXAS - Very light on grain sorghum in Brazos and Burleson Counties. (Randolph). Damage to peanuts lessening. (Harding). WYOMING - Trace of damage observed in several corn fields near Torrington, Goshen County. Damage so scattered no estimate of population was possible. (Davison). COLORADO - Averaged 3-5 larvae per 10 ears of corn in Adams, Weld and Larimer Counties, 5-10 in Prowers, Bent, Otero and Pueblo Counties. (Ext. Serv.). IDAHO - Heavy in garden sweet corn in Bingham County. Infestation 100 percent in several plantings in vicinity of Aberdeen, many with 2 larvae per ear. Mostly third and fourth-instar larvae. (Bishop). OREGON - Infestation increased over 1957 in mid-Willamette Valley. Losses as high as 7 percent ear weight on graded samples. (Every). CALIFORNIA - Heavy in corn fields in Walnut Grove area, Sacramento County. (Cal. Coop. Rpt.).

ARMYWORM (*Pseudaletia unipuncta*) - NEW JERSEY - Moths numerous, but few larvae. Some recent damage to field corn in southern part of State. (Ins. Dis. Newsl.).

FALL ARMYWORM (*Laphygma frugiperda*) - NEW JERSEY - Moths and larvae increased in numbers. Damaged late plantings of field corn. (Ins. Dis. Newsl.). DELAWARE - Caused heavy damage to late field corn in New Castle County. (MacCreary, Conrad). MARYLAND - Continued to cause damage to corn. (U. Md., Ent. Dept.). ALABAMA - Caused considerable damage to grain sorghum in central and northern parts of State. (Hays). LOUISIANA - Heavy on corn in northern parishes. Young corn 100 percent infested. (Spink). ARKANSAS - Larvae averaged 1-2 per plant on young corn in northern Mississippi County. (Ark. Ins. Rpt.). KANSAS - No larvae found in sorghum heads in any east central and northeastern counties. (Matthew).

SORGHUM WEBWORM (*Celama sorghiella*) - TEXAS - Averaged 50-150 larvae per 10 heads of grain sorghum in Brazos and Burleson Counties. (Randolph). Light to medium on late maize in Milan County. (Hawkins). INDIANA - Infesting 50 percent of heads of grain sorghum in Pike County. (Osmun). MISSOURI - Larvae averaged 0-2 per head of grain sorghums over south central and southeast areas. Infestations much lower than at same time in 1957. (Kyd, Thomas). ARKANSAS - Larvae averaged 0-5 per head in grain sorghum in northeastern part of State. Larvae found on Johnson grass in northern Mississippi County. (Ark. Ins. Rpt.). ALABAMA - Heavy in fields of grain sorghum in northern part of State, with 12-15 larvae per head noted. (Grimes, Hays).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - INDIANA - Common in flowering heads of grain sorghum in breeding nurseries in Tippecanoe County. (Osmun).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - NEW MEXICO - Caused severe damage to corn in Luna County fields. (N. M. Coop. Rpt.). LOUISIANA - Caused considerable damage to corn in Webster, Claiborne and Caddo Parishes. (Spink). ARKANSAS - Moths continued to lay eggs north of Arkansas River Valley. Eggs hatched in many fields. (Ark. Ins. Rpt.).

A WEEVIL (Centrinaspis penicellus) - INDIANA - Abundant in opening tassels of late-planted field corn in Vanderburgh County. (Osmun).

FALSE CHINCH BUGS (Nysius spp.) - SOUTH DAKOTA - Nymphs averaged 14 per 100 sweeps in southeast and south central alfalfa fields. (Hantsbarger, Klix). NEW MEXICO - Heavy, caused damage to grain sorghum at Deming, Luna County, and near Rodeo, Hidalgo County. (N. M. Coop. Rpt.). UTAH - Mostly adults, extremely abundant in many parts of State on range, field margins and gardens. Damage to economic crops generally light to moderate. (Knowlton).

CORN LEAF APHID (Rhopalosiphum maidis) - OHIO - Infestation on field corn subsided without damage to crop. (Neiswander). WISCONSIN - Populations continued high, but comparatively little flight activity indicated by trapping at Madison. In Columbia County, colonies in field corn appeared to be building up, but parasite populations seemed to be high. (Wis. Coop. Sur.). MARYLAND - Numbers diminished, particularly in Queen Annes County. (U. Md., Ent. Dept.).

SORGHUM MIDGE (Contarinia sorghicola) - OKLAHOMA - Swarms caused up to 100% percent damage to sorghum in Stillwater area. (Wood).

SPIDER MITES - COLORADO - Tetranychus telarius increased on corn in some areas of Weld, Adams and Larimer Counties. (Exp. Sta.). MARYLAND - Two moderate infestations noted on soybeans at Princess Anne. (U. Md., Ent. Dept.). UTAH - Damaged fields of corn in many parts of State. Damage often severe. (Knowlton).

APHIDS - IDAHO - Heavy in young barley fields recently taken out of sagebrush near Bruno. Necessitated controls for third time this season. (Waters).

HESSIAN FLY (Phytophaga destructor) - NEBRASKA - Survey showed percent stem infestation per 50-stem sample of wheat ranged 1.8-5.6 in western section, 4.7-18.6 in southwest, 2-8 in south central (Jones), 3.8-13 in southeast, 0.3-5.3 in east and central Platte Valley and 0-4 in Loup Valley. (Andersen). OREGON - Incidence low. Slight amount of early season damage to winter wheat in Polk, Marion and Yamhill Counties. (Every). MISSOURI - Summer stubble survey showed State average of 2.6 percent of stems infested in 58 counties surveyed. Averages of 5 stops in a county showed a range of 0-17.2 percent. (Kydt, Thomas).

STINK BUGS - ARKANSAS - Averaged 21 per 10 sweeps on rice in Poinsett County. (Ark. Ins. Rpt.). LOUISIANA - Oebalus pugnax averaged 35-90 per 100 sweeps in Vermilion Parish rice fields. (Spink).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - NEW MEXICO - Light, about one per sweep, in most alfalfa fields in southern counties. Adults abundant. (N. M. Coop. Rpt.). WYOMING - Adults numerous in Sweetwater County alfalfa fields. No damage observed. (Davison). DELAWARE - Remained very common in certain alfalfa fields throughout State. (MacCreary, Conrad).

GARDEN WEBWORM (Loxostege similalis) - DELAWARE - Fairly common in alfalfa in various Sussex and New Castle County fields. (MacCreary, Conrad).

GREEN CLOVERWORM (Plathypena scabra) - NEW JERSEY - Numerous in some alfalfa fields. (Ins. Dis. Newsl.). NORTH CAROLINA - Caused light to moderate damage to 7,000 acres of soybeans in Pender County. (Scott, Farrier). DELAWARE - Decreased considerably on soybeans throughout State. Averaged one per 10 sweeps in alfalfa in all areas, with 8 per 10 sweeps in one Kent County field. (MacCreary, Conrad). MARYLAND - Numbers continued to decrease on soybeans on Eastern Shore. (U. Md., Ent. Dept.). MISSOURI - Larvae averaged 0.5-1 per sweep of alfalfa in south central and southeast areas and 1-4 per linear foot of row on soybeans in extreme southeast area. (Kyd, Thomas).

SALT-MARSH CATERPILLAR (Estigmene acrea) - DELAWARE - Feeding lightly on soybeans in parts of Sussex County. (MacCreary, Conrad).

VARIEGATED CUTWORM (Peridroma margaritosa) - COLORADO - Caused considerable damage to alfalfa in southeastern Weld County. Averaged 70 per 100 sweeps. (Exp. Sta.).

VELVETBEAN CATERPILLAR (Anticarsia gemmatilis) - LOUISIANA - Heavy but spotty in soybeans in St. Landry Parish. (Spink).

ALFALFA WEEVIL (Hypera postica) - WYOMING - Adults and larvae observed in alfalfa in northern Sweetwater County, but not in sufficient numbers to obtain estimate of infestation. (Davison). DELAWARE - Adults averaged 2 per 10 sweeps in alfalfa in Kent and Sussex Counties, 5 per 10 sweeps in one New Castle County field. (MacCreary, Conrad).

BEAN LEAF BEETLE (Cerotoma trifurcata) - KANSAS - Found in all soybean fields examined in 5 east central counties. Ranged 6-90 per 25 sweeps. (Matthew). NORTH CAROLINA - Caused light to moderate injury on over 7,000 acres of soybeans in Pender County. (Scott, Farrier). MARYLAND - Heavy on young soybeans at Princess Anne. (U. Md., Ent. Dept.). MISSOURI - Counts ranged 2-6 adults per linear foot of row in soybeans in extreme southeast area. (Kyd, Thomas).

MEXICAN BEAN BEETLE (Epilachna varivestis) - ALABAMA - Light to moderate on soybeans in northern part of State. (Hays).

PEA APHID (Macrosiphum pisi) - MARYLAND - Increased on alfalfa, averaged 12 per sweep in Frederick County. (U. Md., Ent. Dept.). DELAWARE - Increased in most alfalfa fields throughout State. (MacCreary, Conrad). MISSOURI - Ranged 5-60 per sweep in alfalfa in south central area. Only occasional aphid found on alfalfa in extreme southeast area. (Kyd, Thomas). UTAH - Control necessary in alfalfa for seed at Woodside and in parts of Uintah Basin. (Knowlton). NEVADA - Abundant, spotted infestations in northern counties. (Parker, et al., Aug. 22). COLORADO - Averaged 100-300 per 100 sweeps in alfalfa in Weld, Adams and Larimer Counties; 500-1000 in Mesa County; 50-100 in Montrose, 50-200 in Delta and 50-300 in Garfield Counties. (Exp. Sta.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - MISSOURI - Ranged from less than one to 135 per sweep in alfalfa in south central area. None found in extreme southeast area. (Kyd, Thomas). OKLAHOMA - Remained light in east central and northeastern counties, generally averaged less than 30 per 10 sweeps. (Coppock). KANSAS - None found in alfalfa fields surveyed in 7 east central counties and 7 northeast counties. (Matthew). COLORADO - Averaged 40-100 per 100 sweeps in alfalfa in Adams and Weld Counties, 10-30 in Delta, Montrose and Garfield Counties. Heavy in Mesa County, 3,000 per 100 sweeps. (Exp. Sta.). NEVADA - Averaged 2 per sweep in Diamond Valley, Eureka County. (Parker, Aug. 22). Continued to increase in Clark and Nye Counties. (Lauderdale, Zoller, Aug. 22). UTAH - Present in several counties but controls necessary only in Washington and Millard Counties. Large winged populations in some fields appear to be migrating. Caused moderate damage to alfalfa at Blanding, San Juan County, and at Moab, Grand County. Present in Emery County. (Knowlton).

LEAF-FOOTED BUG (Leptoglossus phyllopus) - ALABAMA - Moderate on soybeans in northern part of State. (Grimes, Hays).

LYGUS BUGS (Lygus spp.) - SOUTH DAKOTA - Averaged 135 per 100 sweeps on alfalfa in south central and southeast districts. (Hantsbarger, Klix). UTAH - Caused severe damage to some alfalfa seed fields in Uintah and Duchesne Counties, where control was delayed. (Knowlton).

CLOVER LEAFHOPPER (Aceratagallia sanguinolenta) - SOUTH DAKOTA - Numerous in alfalfa fields in southeast and south central districts. Averaged 148 per 100 sweeps. (Hantsbarger, Klix).

POTATO LEAFHOPPER (Empoasca fabae) - NEW JERSEY - Up to 8 per sweep in alfalfa, with most fields having 1-4. Growth apparently not impaired, no typical yellowing symptoms reported. (Ins. Dis. Newsl.). MARYLAND - Generally light on alfalfa in Frederick County. (U. Md., Ent. Dept.). KANSAS - Found in nearly all alfalfa fields surveyed. Ranged 5-65 per 25 sweeps. (Matthew).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - NEW MEXICO - Averaged 2-3 per sweep in alfalfa fields in Dona Ana, Luna and Grant Counties. (N. M. Coop. Rpt.). TEXAS - Averaged 45 per 5 sweeps in untreated alfalfa test plots in Brazos and Burleson Counties. (Randolph). LOUISIANA - Caused some damage to soybeans in St. Landry Parish. (Spink).

LEAFHOPPERS - NORTH CAROLINA - Caused moderate damage to peanuts, Pender County. (Scott).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - TEXAS - Infestation in Frio County peanuts averaged 28.2 percent. (Harding).

RED-NECKED PEANUTWORM (Stegasta basqueella) - TEXAS - Averaged one larva per 20 peanut plants in Frio County. (Harding).

THRIPS - NORTH CAROLINA - Caused up to 5 percent leaf injury per plant in peanuts in Pender County. (Scott).

CHINCH BUG (Blissus leucopterus) - NEW JERSEY - Some difficulty encountered in control in Bergen County lawns. (Ins. Dis. Newsl.).

A CHINCH BUG - SOUTH CAROLINA - Unusually numerous in St. Augustine grass lawns from Columbia and Aiken to Charleston and along the coast. (Nettles). LOUISIANA - Continued to be a problem on St. Augustine grass in southern part of State. (Spink).

CICADA KILLER WASPS - NEW JERSEY - Caused considerable damage to lawns in some areas. (Ins. Dis. Newsl.).

A CRAMBID (Ommatopteryx texana) - CALIFORNIA - Heavy in fields infested with Johnson grass in Grangeville area of Kings County. (Cal. Coop. Rpt.).

WHITE GRUBS (Phyllophaga spp.) - UTAH - Damaged quite a few lawns in Salt Lake-Murray area, Salt Lake County, at Price, Carbon County, and at St. George, Washington County. (Knowlton).

FRUIT INSECTS

ORCHARD MITES - OKLAHOMA - Heavy infestation on apple trees one location in Garvin County. (Meharg). OHIO - Populations of Panonychus ulmi declining. (Cutright). LOUISIANA - Eotetranychus hicoriae heavily infesting pecan trees generally. (Spink). OREGON - Tetranychus telarius building up to large numbers in stone fruits in Willamette Valley. (Morrison, Jones). UTAH - Damage conspicuous on apples, pears and sometimes to plums and prunes in several counties. Tetranychus mcdanieli serious many orchards in Weber County. Bryobia praetiosa complex less common than for several years in orchard areas. (Knowlton).

CODLING MOTH (Carpocapsa pomonella) - OHIO - Infestation remains low in commercial orchards. A few second brood still emerging. (Cutright).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - OHIO - Increases in damage by late second-brood larvae in some orchards. (Cutright)

FRUIT TREE LEAFROLLER (Archips argyrospila) - CALIFORNIA - Light, general infestation on pear trees in El Dorado County. Some loss of fruit due to scarring. (Cal. Coop. Rpt.).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - OREGON - Populations increased in known-infested orchards in Salem area. Fruit damage noted for first time since insect was first discovered in the Willamette Valley in 1956. (Larson).

GRAPE LEAF FOLDER (Desmia funeralis) - MISSISSIPPI - Moderate to heavy on grapes in Aberdeen area. (Hutchins).

PECAN NUT CASEBEARER (Acrobasis caryae) - OKLAHOMA - Heavy damage to pecans resulted from first, second and third generation larval feeding in Okemah-Okmulgee area. Occasional third-generation larvae and pupae noted week ending August 30. Damage by third-generation larvae approximated at 5 percent. (Coppock).

FALL WEBWORM (Hyphantria cunea) - ALABAMA - New generation appearing on pecan trees in central and northern areas, apparently heaviest infestation of year. (Grimes).

STINK BUGS - OKLAHOMA - Considerable damage to improved pecan varieties in central and east central areas. (Coppock).

BLACK-MARGINED APHID (Monellia costalis) - CALIFORNIA - Occurred on pecan trees in Highland area of San Bernardino County. (Cal. Coop. Rpt.).

BLACK PECAN APHID (Melanocallis caryaefoliae) - LOUISIANA - Heavily infesting pecans throughout State. (Spink). CALIFORNIA - Infested pecan trees in Riverside, Riverside County. This is first known infestation in State. (Dickson).

PECAN WEEVIL (Curculio caryae) - OKLAHOMA - Light emergence in Okemah area at present. (Coppock).

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - Very light infestation on walnuts in Santa Barbara, Santa Barbara County. (Cal. Coop. Rpt.).

CITRUS RED MITE (Panonychus citri) - MISSISSIPPI - Damaging satsuma orange trees in Ocean Springs. (Hutchins).

AN APHID - MISSISSIPPI - Attacking satsuma orange trees in Ocean Springs area. Species probably Aphis gossypii. (Hutchins).

BARNACLE SCALE (*Ceroplastes cirripediformis*) - LOUISIANA - Infesting citrus in greater New Orleans area. (Spink).

TRUCK CROP INSECTS

CABBAGE LOOPER (*Trichoplusia ni*) - NEW MEXICO - Medium to heavy infestations on young lettuce in Dona Ana County. (N. M. Coop. Rpt.). CALIFORNIA - Numerous on cabbage being harvested, up to 8 per plant, and on young cauliflower, 2-5 per plant, in Orange County. (Campbell). DELAWARE - Prevalent on potatoes and common on broccoli in New Castle County. Generally common on peppers throughout State, but decreased greatly on tomatoes. (MacCreary, Conrad).

CABBAGE WEBWORM (*Hellula rogatalis*) - ALABAMA - Moderate infestations on turnips in Lee and Tallapoosa Counties. (Grimes).

CABBAGE APHID (*Brevicoryne brassicae*) - OREGON - Moderate, general populations of adults and nymphs in broccoli and cauliflower plantings in Woodburn, Gresham and Hillsboro. (Hanna).

HARLEQUIN BUG (*Murgantia histrionica*) - CALIFORNIA - More numerous and widespread than for many years around farming areas in Orange and Los Angeles Counties. No economic damage observed. (Campbell).

BEE T ARMYWORM (*Laphygma exigua*) - CALIFORNIA - Heavy populations on peas and light on potatoes in Watsonville area of Santa Cruz County, medium infestation of tomatoes in Spring Valley of San Diego County, and light on beans in San Jose area of Santa Clara County. (Cal. Coop. Rpt.). OREGON - Damaging numbers appearing on several crops in localized areas from northern Willamette Valley to Medford. (Every, Capizzi). ARIZONA - Severe infestations some sugar beet seed fields in Phoenix area. Another larva, probably *Loxostege sticticalis*, also present. (Bibby).

POTATO LEAFHOPPER (*Empoasca fabae*) - WISCONSIN - "Hopperburn" to unsprayed potatoes becoming more pronounced. (Wis. Coop. Sur.).

POTATO TUBERWORM (*Gnorimoschema operculella*) - CALIFORNIA - Medium infestation of potato plantings in Watsonville area of Santa Cruz County. (Cal. Coop. Rpt.).

VARIEGATED CUTWORM (*Peridroma margaritosa*) - COLORADO - Causing considerable damage to potato foliage in Weld County; 5 to 10 larvae per plant. (Exp. Sta.).

TUBER FLEA BEETLE (*Epitrix tuberis*) - COLORADO - Increasing in Montrose County; 200 to 300 per 100 sweeps. (Exp. Sta.).

COLORADO POTATO BEETLE (*Leptinotarsa decemlineata*) - IDAHO - Populations in Teton County decreased; anticipated treatments not necessary. (Bishop).

HORNWORMS (*Protoparce* spp.) - NEW MEXICO - Damaging chili and tomatoes near Hatch, Dona Ana County and Deming, Luna County. (N. M. Coop. Rpt.). DELAWARE - Very common on tomatoes in State. (MacCreary, Conrad). MARYLAND - Eggs heavy on pepper foliage at St. Martins. (U. Md., Ent. Dept.). UTAH - Damaging tomatoes and potatoes in Emery County. (Knowlton).

GREEN PEACH APHID (*Myzus persicae*) - IDAHO - All potato seed fields examined in Caribou County infested. Maximum populations average 2 per leaf. Light infestations in Teton County. (Bishop). MARYLAND - Heavy on peppers some fields in northern Worcester County. (U. Md., Ent. Dept.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - DELAWARE - Adults very common in pepper fields in Sussex and Kent Counties. (MacCreary, Conrad). MARYLAND - Light to moderate in pepper fruits in Worcester County. No increase noted in past two weeks. (U. Md., Ent. Dept.).

PEPPER WEEVIL (Anthonomus eugenii) - CALIFORNIA - Light infestation in bell peppers at San Juan Capistrano in Orange County. Moderate infestations on chili peppers in San Luis Rey Valley near Oceanside and serious infestation which caused heavy pod loss found near Pala in San Diego County. (Cambell).

A WEEVIL (Anacetrinus deplanatus) - DELAWARE - Collected for first time in State at Millsboro July 29 on peppers. Det. R. E. Warner. (Raine et al.).

LIMA-BEAN POD BORER (Etiella zinckenella) - CALIFORNIA - Light infestation in 200 acres of beans near El Toro Marine Base in Orange County. (Campbell).

GREEN CLOVERWORM (Plathypena scabra) - NEW JERSEY - More numerous on beans that for several years in central area. (Ins. Dis. News1.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - UTAH - Some bean plantings severely damaged in Carbon and Emery Counties. (Knowlton). WYOMING - Continues to damage beans in Goshen County. (Davison). ALABAMA - Infesting beans and field peas in central area. (Ruffin). DELAWARE - Very heavy damage to lima beans in southeastern Sussex County. (MacCreary, Conrad).

COWPEA CURCULIO (Chalcodermus aeneus) - LOUISIANA - Heavy on cowpeas in Webster Parish. (Spink).

CELERY LEAF TIER (Udea rubigalis) - CALIFORNIA - Light infestation of beans in Watsonville area of Santa Cruz County. (Cal. Coop. Rpt.). DELAWARE - Prevalent in carrot field in New Castle County. (MacCreary, Conrad).

SWEETPOTATO LEAF ROLLER (Pilocrocis tripunctata) - LOUISIANA - Heavily infesting sweetpotato foliage in St. Landry Parish. (Spink).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - OREGON - Building up to large numbers in hops in Willamette Valley. (Morrison, Jones).

TOBACCO INSECTS

HORNWORMS (Protoparce spp.) - WISCONSIN - Attack on tobacco in Dane County appeared somewhat later than usual this year. Not more than 5 to 10 percent of plants involved most fields. Harvest has begun. (Wis. Coop. Sur.).

COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - SOUTH CAROLINA - Causing considerable damage to unprotected cotton generally. (Cott. Lett.). TENNESSEE - Infestations general in western area with heavy migration to late cotton. Third-generation weevils continue to hatch with overlapping of first, second and third generations. (Locke). ALABAMA - Infestations increasing all areas of State. Infestations ranged 40 to 50 percent in northern area with evidence of migration in area. Migration continues in central area. (Grimes). ARKANSAS - Cotton is "cutting out" in many areas of State. Migration has begun. Buildups beginning in Poinsett and Mississippi Counties. (Ark. Ins. Rpt.) OKLAHOMA - Increasing in irrigated cotton in southwest; commonly exceeding

25 percent infested squares. Light numbers in upland cotton. (Bryan). MISSOURI - Percent punctured squares ranged from 1-62 in 243 fields of 699 scouted. (Kyd, Thomas). MISSISSIPPI - Infestation generally low in delta counties. Some fields in eastern part of delta have high infestations. Local migration common in fields where infestations have been high. (Merk et al.). LOUISIANA - Average percent infestation was 32.4 in Avoyelles Parish, 12 to 17.4 in Ouachita Parish, 33.9 in Richland Parish, 11 in Tensas Parish, 32 in Franklin Parish, 8 in East Carroll Parish, 16.6 in Morehouse Parish, 14.7 in Grant Parish and 15.6 in Rapides Parish. (Spink). Average infestation 14 percent in Madison Parish. (Smith et al.).

BOLLWORMS (*Heliothis* spp. et al.) - SOUTH CAROLINA - Populations and damage increasing in Piedmont counties. (Cott. Lett.). TENNESSEE - Large larvae present most cotton fields in western area, considerable damage being caused to large bolls. (Locke). ALABAMA - Infestations increased considerably in northern area. In Madison County, several fields with 50-75 percent of terminals damaged by young larvae. Eggs prevalent in area. (Grimes). ARKANSAS - Moths are emerging in large numbers and eggs are being laid over entire cotton plant. (Ark. Ins. Rpt.). OKLAHOMA - Untreated fields in southwestern area generally average approximately 3 percent infested bolls. (Bryan). MISSOURI - Of 699 fields scouted, 609 infested with from 1-30 eggs and 1-15 larvae per 100 plants. Control being applied several counties. (Kyd, Thomas). MISSISSIPPI - Extremely heavy egg deposition common in delta counties. Small larvae appearing some fields. Many fields require treatment. (Merk et al.). LOUISIANA - Percent infestation averaged 3.8 in Avoyelles Parish, 2.0 to 2.6 in Ouachita Parish, 6.1 in Richland Parish, 3.0 in Tensas Parish, 2.0 in Franklin and East Carroll Parishes, 3.4 in Morehouse Parish, 5.3 in Grant Parish and 8.1 in Rapides Parish. Figures represent eggs rather than larvae in most instances. (Spink). Average square infestation 7 percent in Madison Parish. Light boll damage most fields and severe in few fields. (Smith et al.). NEW MEXICO - Under control most cotton-growing areas, except some fields near Cotton City and Rodeo in Hidalgo County where at least half of all squares and bolls destroyed. (N. M. Coop. Rpt.). ARIZONA - Sufficient numbers some fields to require control. (Bottger, Kauffman, Sheets).

CABBAGE LOOPER (*Trichoplusia ni*) - OKLAHOMA - Populations in southwestern and central fields generally lower than during past two years. (Bryan). NEW MEXICO - Several heavy infestations in Luna County; most larvae diseased. Generally light to moderate other areas. (N. M. Coop. Rpt.). ARIZONA - Larval populations low; eggs numerous. Apparently virus preventing any serious buildups. (Bottger, Kauffman, Sheets). CALIFORNIA - Declining many fields in Kern County. Large numbers being destroyed by a virus disease. (Leigh, Beards).

COTTON LEAF PERFORATOR (*Bucculatrix thurberiella*) - ARIZONA - Populations generally light, some fields heavily infested. (Bottger, Kauffman, Sheets).

LEAFWORMS - OKLAHOMA - Lighter than for several years throughout State. (Bryan).

A LEAF ROLLER (*Platynota stultana*) - CALIFORNIA - Light infestation in cotton in Riner area of Imperial County. (Cal. Coop. Rpt.).

SALT-MARSH CATERPILLAR (*Estigmene acrea*) - ARIZONA - Some heavy infestations in Pinal County. Light infestations present throughout Salt River and Santa Cruz Valleys. (Bottger, Kauffman, Sheets).

SPIDER MITES - SOUTH CAROLINA - Infestations spreading in many Piedmont area cotton fields. (Cott. Lett.). TENNESSEE - Continue serious over western area. Nearly all fields infested. (Locke). ALABAMA - Continue to cause serious damage in northern area. Several fields with as much as two-thirds of foliage destroyed. *Tetranychus* spp. prevalent species. (Grimes). ARKANSAS - Populations declining. (Ark. Ins. Rpt.). MISSOURI - Infestations ranged from light to heavy in 515 fields of 699 scouted. Some severe defoliation occurring in occasional fields. Numbers of mites and eggs declined sharply during week. (Kyd, Thomas). MISSISSIPPI - Spotty light infestations widely scattered over delta counties. (Merkel et al.). NEVADA - Light infestation on borders of cotton fields in Pahrump Valley, Nye County. (Zoller, Aug. 22).

APHIDS - NEW MEXICO - *Aphis gossypii* generally light most southern counties, spotty heavy infestations. (N. M. Coop. Rpt.). OKLAHOMA - Light in southwestern counties. (Bryan). TENNESSEE - Becoming heavy in succulent cotton in western area. Damage being confused with spider mite injury. Infestations heavy enough to warrant control if buildup continues. (Locke). ALABAMA - *A. gossypii* building up in many fields. (Grimes). ARKANSAS - Building up in most cotton fields. (Ark. Ins. Rpt.). MISSISSIPPI - Spotty light infestations widely scattered over delta counties. (Merk et al.).

LYGUS AND STINK BUGS - NEVADA - Moderate on cotton in Pahrump Valley, Nye County. (Zoller, Aug. 22). CALIFORNIA - Nymphs and adults of *Lygus* spp. numerous some fields in Tulare and Kern Counties. (George, Leigh, Beards). ARIZONA - Populations of *Lygus* spp. declined in Maricopa County, but numerous in all Pinal County fields examined. Stink bugs present most fields, but light. (Bottger, Kauffman, Sheets).

LEAFHOPPERS - NEVADA - Causing defoliation of lower leaves on cotton in Moapa Valley, Clark County. (Zoller, Aug. 22).

WHITEFLIES - CALIFORNIA - Abundant in few fields in Shafter area of Kern County. Heaviest populations occur along margins of fields. (Leigh, Beards).

A BEETLE (*Conotelus mexicanus*) - CALIFORNIA - Heavy infestations on cotton in Bard area of Imperial County. (Cal. Coop. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

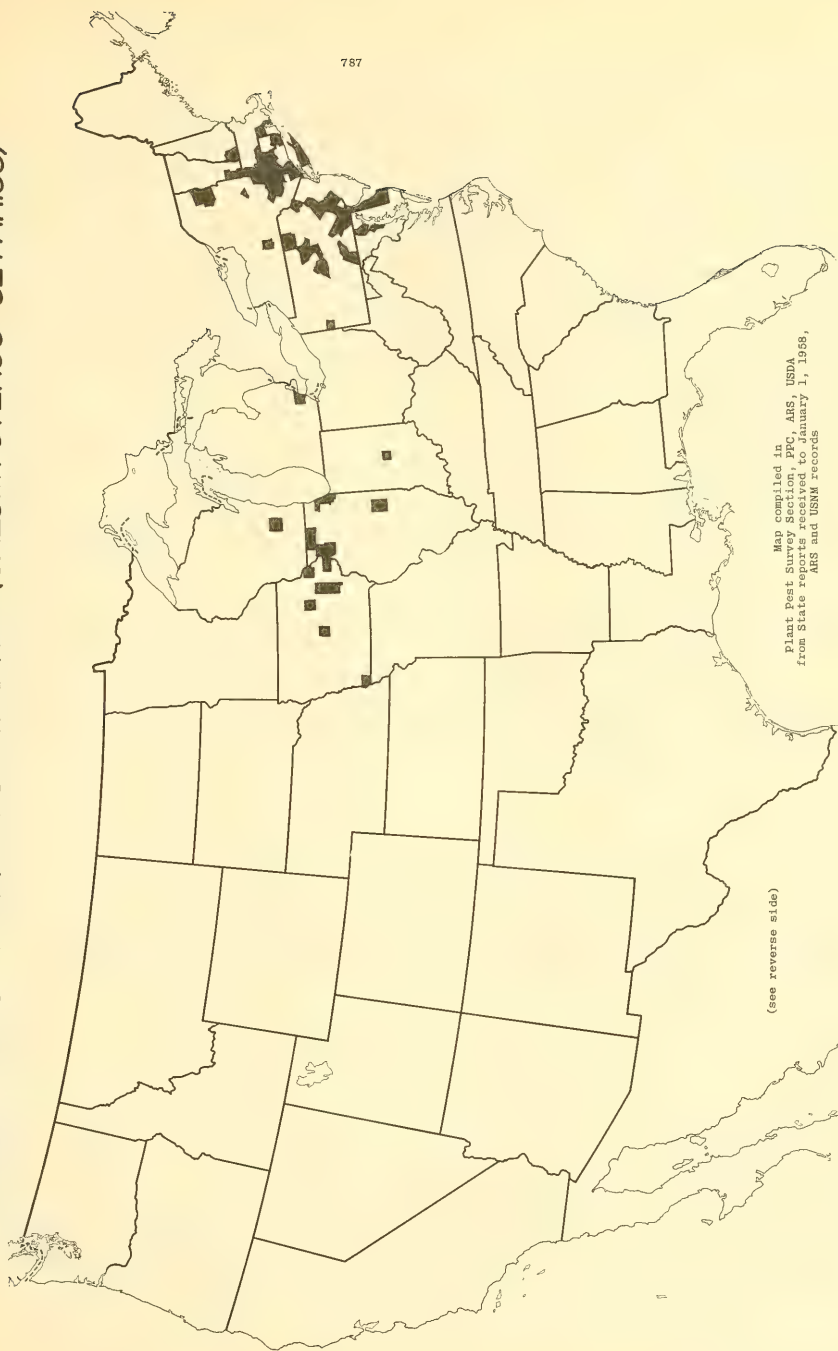
SAWFLIES - FLORIDA - *Neodiprion* sp. (may be *exitans*) defoliating loblolly pine. Over 5,000 acres infested in Levy County and 15,000 in Taylor County. Almost 100 percent defoliation on 5,000 acres in Taylor County. (McCowan, Aug. 25). DELAWARE - *Nematus ventralis* feeding very heavily on willows locally in Sussex County. (MacCreary, Conrad). WISCONSIN - A small jack pine plantation in northwest area with infestation of 5 percent of *Neodiprion lecontei*. Insect numerous on scattered trees in the open. Majority of larvae now pupated. (Wis. Coop. Sur.).

A ROOT COLAR WEEVIL - WISCONSIN - Heavy jack pine mortality showing up in most northwest areas, but especially in Polk, Burnett and Washburn Counties. Infestations as high as 90 percent in many plantations. (Wis. Coop. Sur.).

YELLOW-NECKED CATERPILLAR (*Datana ministra*) - DELAWARE - Feeding fairly heavily on pin oaks in New Castle County. (MacCreary, Conrad).

WALNUT CATERPILLAR (*Datana integerrima*) - PENNSYLVANIA - Completely defoliated walnut trees in Lancaster and Chester Counties. (Sleesman, Aug. 13).

DISTRIBUTION OF A JAPANESE WEEVIL (*CALOMYCTERUS SETARIUS*)



A JAPANESE WEEVIL (Calomycterus setarius Roelofs)

Economic Importance: This long-horned weevil is indigenous to Japan and was first found in the United States at Yonkers, New York, in 1929. In that year, the weevils were numerous in the area where they were first found which indicates that they were present for a few years. This species is a general feeder, eating out characteristic round patches in the margin of the leaf blade. Destructive outbreaks have occurred in limited areas in Connecticut, New Jersey and Maryland, with scattered records as far west as Iowa. When numerous it is a household pest, countless numbers being attracted to lights or colored walls.

Distribution: Japan and United States.

Hosts: Among its preferred hosts are ivy, lespedeza, African marigold, rose and Virginia creeper. It will also feed on many other agricultural and ornamental plants.

Life History and Habits: The adults begin to emerge from the soil in late June in Connecticut, but are not abundant until July or early August. After the first part of August they disappear rapidly, but a few may be found until frost. Adults feed on upper surfaces of foliage, in both shade and sunlight. When abundant they can be readily found over the entire plant. Feeding leaves a scalloped appearance on the leaves. Eggs are usually found in clusters of 2 or 3 and hatch in about 9 days at room temperature. The larvae are present in the soil from midsummer until June of the following year, feeding in the upper three inches and hibernating at deeper levels.

Description: The egg is white, elliptical with ends bluntly rounded; about 0.6 mm. in length. Larva grayish-white when mature with a faint pink cast midway dorsally on body. Mature larva about 5 mm. long. Pupa white, about 4.3 mm. long, very fragile. Pupal eyes become black with age. Head with 12 reddish-brown setae. Adult generally grayish-white with greenish-yellow or coppery metallic cast. Brownish scales present on head, pronotum and elytra. Length 3.5 to 4.5 mm. Antennae and legs reddish-brown; a small spine-like tooth appears near middle of each femur. (CEIR 8(36) 9-5-58)

PALE TUSsock MOTH (Halisidota tessellaris) - DELAWARE - Feeding on oaks and honeylocust in New Castle County. (MacCreary, Conrad).

AN OAK GALL WASP (Callirhytis perdens) - CALIFORNIA - Heavy infestation of oaks causing swellings on twigs in Napa County. (Cal. Coop. Rpt.).

APHIDS - CALIFORNIA - Myzocallis californicus damaging oaks. Medium populations in Yucaipa area of San Bernardino County. (Cal. Coop. Rpt.).

ELM LEAF BEETLE (Galerucella xanthomelaena) - IDAHO - Extremely severe infestation in Twin Falls area. (Gibson). CALIFORNIA - Medium on elms in San Andreas area, Calaveras County, and heavy in Hornitos in Mariposa County. (Cal. Coop. Rpt.). OKLAHOMA - Continues heavy damage to Chinese elms in central area. (Bower). UTAH - Severely damaging large numbers of elms in Salt Lake and Weber Counties. The most extensive damage in several years. (Knowlton).

FALL WEBWORM (Hyphantria cunea) - SOUTH DAKOTA - Numerous infestations throughout State on various shade trees. (Klix, Hantsbarger). NORTH CAROLINA - A webworm, probably this species, severely defoliating oaks and wild cherry in Hertford, Northampton, Halifax, Vance and Granville Counties. (PPC).

BAGWORM (Thyridopteryx ephemeraeformis) - NORTH CAROLINA - Defoliating juniper locally in Madison County. (Hawley, Farrier). DELAWARE - Heavy damage to red cedars in Sussex County. (MacCreary, Conrad).

MITES - NORTH CAROLINA - An eriophyid mite, probably Vasates magnolivora, abundant in leaf hairs of magnolia leaves and causing discoloration in many areas of State. (Scott, Farrier). DELAWARE - Oligonychus bicolor quite conspicuous on red oaks in New Castle County. (MacCreary, Conrad). UTAH - Damaging 100 willow trees along Farmington-Kaysville highway. (Knowlton).

SCALE INSECTS - UTAH - Gossyparia spuria damaged elms several localities. Lepidosaphes ulmi damaging shade trees at Manti. Some trees removed due to this pest. (Knowlton).

A TWIG BORER (Proteoteras aesculana) - CALIFORNIA - Damaging maples. Medium infestation in Salinas area of Monterey County. (Cal. Coop. Rpt.).

MULBERRY WHITEFLY (Tetraleurodes mori) - RHODE ISLAND - Puparia heavy on linden in Providence, August 21. (Mathewson).

MIMOSA WEBWORM (Homadaula albizziae) - FLORIDA - Larvae collected on mimosa at Milton, Santa Rosa County, August 19. (Beatty). First record for State. DELAWARE - Extensive damage to honeylocust in New Castle County. (MacCreary, Conrad).

VIRGINIA-CREEPER LEAFHOPPER (Erythroneura ziczac) - UTAH - Seriously damaging Virginia creeper in many localities. (Knowlton).

LACE BUGS - DELAWARE - In New Castle County Stephanitis pyrioides common on azaleas, Corythucha cydoniae common on hawthorn and C. ciliata heavy on London plane trees. (MacCreary, Conrad).

A JAPANESE WEEVIL (Pseudocneorhinus bifasciatus) - MARYLAND - Injury to various ornamentals at Chevy Chase. (U. Md., Ent. Dept.).

EASTERN LUBBER GRASSHOPPER (Romalea microptera) - MISSISSIPPI - Heavy in Holly Springs and Columbus. Considerable damage to flowers in parks and adjoining neighborhood. (Hutchins, Aug. 23).

INSECTS AFFECTING MAN AND ANIMALS

CAT FLEA (Ctenocephalides felis) - CALIFORNIA - Nuisance locally on lawns in Merced, Merced County. Fleas more prevalent this year in many locations of State than in former years. (Cal. Coop. Rpt.). OREGON - Fleas, apparently this species, predominating, are much more abundant than usual, judging from numerous inquiries. (Every).

MOSQUITOES - NEW MEXICO - Very annoying throughout most of State. Molesting horses in northern counties. (N. M. Coop. Rpt.). UTAH - Annoying man in Price-Helper area of Carbon County. (Knowlton).

HOUSE FLY (Musca domestica) - NEVADA - Heavy populations and more numerous than in previous years in vicinity of dairies in Clark and Lincoln Counties. (Bunker, Lauderdale, Aug. 22). Heavy scattered populations in Fish Lake Valley, Esmeralda County. (Parker, Aug. 22).

FLIES - UTAH - Horse bots severely annoying horses at Provo and Pleasant Grove in Utah County. (Knowlton). NEVADA - Hippelates collusor extremely numerous and annoying in Moapa and Virgin Valleys, Clark County. (Zoller, Aug. 22). WISCONSIN - Reports of severe fly problem in barns where sanitation and treatment lacking. (Wis. Coop. Sur.). OKLAHOMA - Stable flies appreciably lower than at this time last year in Stillwater area; 5-10 per animal. Horse flies very low in central area except along wooded streams, generally less than one per animal. (Howell).

HORN FLY (Siphona irritans) - NEW MEXICO - Extremely heavy on cattle where control not used. (N. M. Coop. Rpt.). OKLAHOMA - Average 100-300 on mature cows in Okfuskee County, slightly higher in northeastern counties. (Coppock). Average 100-300 per untreated animal in Stillwater area. (Howell). UTAH - Numerous and annoying cattle in 6 counties. (Knowlton).

A MITE (Haemolaelaps glasgowi) - NORTH CAROLINA - Heavy population in a broiler house which had been unoccupied for several weeks in Nash County. (Scott, Farrier).

EAR TICK (Otobius megnini) - UTAH - Infesting a number of Beaver County herds. (Knowlton).

STORED-PRODUCT INSECTS

INDIAN-MEAL MOTH (Plodia interpunctella) - NORTH CAROLINA - Numerous adults emerging from large lots of pinto beans received at Central Prison. (Scott, Farrier).

BENEFICIAL INSECTS

PARASITES AND PREDATORS - SOUTH DAKOTA - Chauliognathus pennsylvanicus populations in alfalfa of south central and southeast districts average 33 per 100 sweeps. Orius insidiosus populations average 36 per 100 sweeps in alfalfa fields in same areas. (Hantsbarger, Klix). NORTH CAROLINA - Apanteles sp. more abundant this year on larvae of catalpa sphinx than in the past 5 years. (Scott). UTAH - Predaceous insects extremely numerous in pea aphid damaged fields near Gunnison. Lady beetles, lacewings, syrphids, Nabis sp. and Orius sp. in abundance in worst infested fields. (Knowlton).

MISCELLANEOUS INSECTS

STRAW ITCH MITE (Pyemotes ventricosus) - CALIFORNIA - Medium in hay in Van Nuys, Los Angeles County. (Cal. Coop. Rpt.).

A DAMPWOOD TERMITE (Zootermopsis angusticollis) - OREGON - Winged forms observed during week of August 11 in western area. This somewhat earlier than usual. (Every).

A FAN PALM MOTH (Litoprosopus coachella) - CALIFORNIA - Heavy infestation in paper and wool in Bakersfield, Kern County. (Cal. Coop. Rpt.).

FIELD CRICKET (Acheta assimilis) - TEXAS - Very heavy around lights and entering homes in Dimmit County. (Harding).

EUROPEAN EARWIG (Forficula auricularia) - IDAHO - Heavy infestations in and about homes in Twin Falls. (Gibson).

STRAWBERRY ROOT WEEVIL (Brachyrhinus ovatus) - CALIFORNIA - Invading houses in Susanville, Lassen County. (Cal. Coop. Rpt.).

ASIATIC OAK WEEVIL (Cyrtopistomus castaneus) - MARYLAND - Common in different parts of State and in various situations. Common on tobacco in St. Marys County, but not damaging to this crop. (U. Md., Ent. Dept.).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Protoparce sexta	quinq.	Heliiothis zea vires.
ALABAMA								
Crossville 8/25-26	19	15					43	204
FLORIDA								
Gainesville 8/25						1		1
Quincy 8/19						47		96
ILLINOIS								
Urbana 8/22-28	32	4	3	20	9			20
INDIANA (Counties)								
Orange 8/20-25	17	12	11	1	1	24	56	4
Tippecanoe 8/21-26	15	3	6	20	8	1	1	13
KANSAS								
Garden City 8/16-23	44	12	4			14	14	92
Hays 8/15-18, 21-26	30	9	9					33
Manhattan 8/10-29	205	134	532			9		1013
LOUISIANA								
Baton Rouge 8/22-28	9	8	13		250			74
Franklin 8/28	2			2	7			1
Shreveport 8/26, 28	14	1	2	2	12			18
MAINE								
Presque Isle 8/24-30	1							
MARYLAND								
Fairland 8/22-27	17	18		3	5	2	3	20
MISSISSIPPI								
Grenada 8/18-23	4	3	1					1
Senatobia 8/14-21	16	9			15			11
*State College 8/23-29	55	47	27		166	3		76
*Stoneville 8/22-28	190	37	44		568	10	1	232
NEW MEXICO								
Deming 8/26							68	
Virden 8/27							31	
NORTH CAROLINA								
Clayton 8/22-28	3	3						
Faison 8/22-28	26	17	20			11		22
SOUTH CAROLINA								
Clemson 8/23-29	392	84	97	3	34	12	7	35
CORN EARWORM (<i>Heliiothis zea</i>) - WISCONSIN - 8/19-25:								
Arlington - 39; Atisco - 1;								
Janesville - 6; Gays Mills - 2; LaCrosse - 19; Middleton - 2; Ripon - 13;								
River Falls - 1; Rosendale - 8; *Theresa - 4; Waterford - 1.								

*MISSISSIPPI - Two traps - State College; 4 traps - Stoneville. WISCONSIN - Three traps - Arlington and Theresa.

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SEPTEMBER 12, 1958

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Cooperative

**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GRASSHOPPERS threatening and severe in areas of New Mexico. (p. 795). Local migration flights observed in southwestern Kansas. (p. 807).

New county records for EUROPEAN CORN BORER in North Carolina and Alabama. (p. 795).

CORN EARWORM infestations in corn high in southeast Nebraska and in Oregon. (p. 795).

SPIDER MITES abundant on various crops in several states. (p. 796).

New county record for WALNUT HUSK FLY in California. (p. 799).

BOLL WEEVIL migration at peak in central Alabama, continuing in Tennessee. (p. 802).

BOLLWORM egg counts high in Arkansas. (p. 802).

SOUTHERN PINE BEETLE epidemic in Tyrrell County, North Carolina. (p. 803).

ADDITIONAL NOTES. (p. 807).

WEATHER OF THE WEEK ENDING SEPTEMBER 8, 1958

Tropical storm Ella, near the western end of Cuba at the beginning of the week, continued in a west-northwesterly course across the Gulf of Mexico and moved inland between Galveston and Brownsville, Tex., on the morning of the 6th. She produced 2 to 4-foot tides along most of the Texas and Louisiana coasts and heavy rains in Texas coastal areas. Galveston, Tex., measured nearly 14 inches of rain in 3½ days during her approach and passage. Although Ella apparently never regained hurricane strength after crossing western Cuba, Grand Isle, La., reported gusts up to 75 m.p.h. on the morning of September 5. Ella brought beneficial rains to many sections in Texas. On September 5, another tropical storm, Fifi, was located about 700 miles east-southeast of San Juan, Puerto Rico. She had gained hurricane intensity by 6 p.m. of the 6th when 450 miles east of San Juan. On the 9th, at 5 a.m., she was 560 miles south-southwest of Bermuda moving northward at 7 m.p.h.

Unseasonably warm, dry weather continued last week in the western Great Plains and west of the Continental Divide, except for a cool snap in northern areas the first 3 days of the period and for a few widely scattered localities which received up to ½ inch or more of rain in local thunderstorms. On the 3d freezing occurred at points in Idaho and in the southwestern valleys of Montana where 22° was recorded at Drummond. Relative to normal, the week was warmest in the Far Southwest where temperatures averaged 3° to 6° above seasonal levels. An inch of rain in the southeastern portion of Salt Lake City, Utah, on the 4th caused street flooding. On the 6th and 7th, scattered thunderstorms occurred throughout California, lightning killed 2 children at Big Bear Lake, burned a house in Fresno and started many forest fires before attendant rains reduced the fire hazard. Some points in northwestern Oregon have received less than 0.05 inch of rain in the past 68 days for one of the longest dry periods there on record. In the eastern half of the Nation, temperatures averaged below normal in the Middle and North Atlantic States and Great Lakes region and above elsewhere, with departures generally less than 3°. A cool air mass sent temperatures down into the 30's and 40's in northern areas early in the week, and Norfolk, Conn., recorded 31° on the 3d.

Rainfall in the eastern half of the Nation was spotty, ranging from none at all to near 14 inches. Greatest totals were produced in Texas by Hurricane Ella, but she also was responsible for 1 to 2-inch totals in southern Florida. Heavy to excessive rains fell in eastern Kansas, the southeastern quarter of Nebraska and parts of Iowa and Missouri. Local amounts up to 11.50 inches were reported from Guthrie and Adair Counties, Iowa, where heavy flooding occurred. Some weekly totals of 5 to 8 inches were reported in eastern Kansas, where some 24-hour amounts of 3 to 7 inches caused flash floods along the Blue, Republican and Kansas Rivers. Rainfall generally was very light from Michigan to eastern Montana and soil moisture continues short in most of this area. The week was virtually rainless south of the Ohio River, except along the Gulf Coast, and rain is now needed in many sections of this area. Some severe local storms were reported in northern areas during the weekend. Hail and wind damaged crops in the Red River Valley of North Dakota on the 6th and in some localities of Wisconsin. A tornado, reported near Willimantic, Conn., on the 7th, smashed a hanger valued at \$25,000, and downed trees and utility lines; considerable damage from wind and lightning occurred in other parts of the State. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - NEW YORK - Caused considerable damage in Conesus area of Livingston County. Fed extensively on field corn and ornamentals. (N. Y. Wkly. Rpt.). DELAWARE - Mostly nymphs numerous in red clover and on soybeans in central Kent County. (MacCreary, Conrad). WISCONSIN - Migration of adult Melanoplus femur-rubrum underway. Will be depositing eggs in soil in new seedings soon. Dissosteira carolina numbers appear greater in some counties than for several years. (Wis. Coop. Sur.). MICHIGAN - Populations in Upper Peninsula are normal. (Hutson). OKLAHOMA - Light damage to margins of sorghum, legumes and cotton in southwestern and south central areas. Generally 6-15 adults per square yard, but with 30-50 in a few locations. Range numbers generally light, 3-8 per square yard. (Coppock, VanCleave). NEW MEXICO - Heavy infestation south of San Jon and another west of Nara Visa, Quay County. Threatening near Amistad, Union County, and threatening to severe south and west of Rosebud, Harding County. M. bilituratus threatening to severe in Maxwell-Miami area in Colfax County. (N. M. Coop. Rpt.). CALIFORNIA - M. differentialis and M. femur-rubrum medium on rangeland meadows near Quincy, Plumas County. Camnula pellucida in mountain meadow pastures. Degree of infestation not reported. (Cal. Coop. Rpt.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - NEW YORK - Maximum infestation of 3 percent was found in treated sweet corn fields surveyed in Monroe and Livingston County area. Damage found in less than 5 percent of unsprayed ears in Hudson Valley. Damage averaged 12 percent in ears of first harvesting of untreated corn in Livingston County. Found in all commercial plantings of sweet corn. (N. Y. Wkly. Rpt.). DELAWARE - Rather heavy feeding in field corn throughout most of State. One Sussex County sweet corn field 100 percent infested. Great many in cobs. Egg laying greatly increased. (MacCreary, Conrad). MARYLAND - Heavy in a few sweet corn fields in Queen Annes County, but larvae generally low on Eastern Shore. (U. Md., Ent. Dept.). NORTH CAROLINA - Taken for first time in Scotland County in corn stalks. (Jones, Farrier). ALABAMA - Heavy infestation in Autauga County is first record for that county. Adults and larvae observed. Most larvae in fourth instar. (Grimes). WISCONSIN - Second-brood moths continued to fly. Egg masses averaged about 20 per 100 plants, with approximately 60 percent hatched in one Columbia County sweet corn planting August 29. No newly hatched larvae were observed. (Wis. Coop. Sur.). SOUTH DAKOTA - Infestation averaged 59 percent in east central district with 102 larvae per 100 plants and 60 percent in central district with 171 larvae per 100 plants. (Hantsbarger, Klix).

CORN EARWORM (Heliothis zea) - NEW YORK - Survey of sweet corn fields in Monroe and Livingston County area showed maximum infestations of 2 percent in treated fields. Larvae of this species predominated in unsprayed commercial ears in Hudson Valley. Trap catches averaged less than one moth a night. (N. Y. Wkly. Rpt.). DELAWARE - Remained prevalent in ears of most sweet and field corn, though somewhat decreased. (MacCreary, Conrad). MARYLAND - Infestations in sweet corn ears ranged 6-80 percent in Queen Annes County. (U. Md., Ent. Dept.). VIRGINIA - Heaviest moth emergence on Eastern Shore occurred during week of August 23. Damage to soybeans light to date, but may increase. (Hofmaster). NORTH CAROLINA - Abundant in milo heads in Gates County. (Newsome). ALABAMA - Moderate on grain sorghum in Wilcox County. (Hays). LOUISIANA - Increased on milo in Tensas Parish. (Spink). WISCONSIN - Few larvae found damaging tips of ears in fields planted May 13-19, Columbia County. Adult flights occurred on favorable nights, numbers in some traps appear to be increasing, but slowly. (Wis. Coop. Sur.). NEBRASKA - Infestation in corn ranged 80-95 percent in southeast portion of State. (Andersen). ARKANSAS - Moths continued to emerge in large numbers. (Ark. Ins. Rpt.). OKLAHOMA - Light in alfalfa throughout western half of State. Averaged 1-5 early-instar larvae per 10 sweeps, generally. Damage to early-planted sorghum decreasing in southwest area. Averaged 1-7 per head in late sorghum. (Coppock, VanCleave). Larvae ranged 10-20 per 100 terminals in peanuts, a decline from previous weeks. (Walton). OREGON - Above normal in mid-Willamette Valley corn. One field showed 90 percent of ears infested and some damage well down toward middle of ears. (Morrison).

ARMYWORM (Pseudaletia unipuncta) - VIRGINIA - Numerous in some sorghum fields in localized Eastern Shore areas. (Hofmaster). Medium on alfalfa in Bland County. (Morris, Mallory).

FALL ARMYWORM (Laphygma frugiperda) - NEW YORK - In Hudson Valley, moths appeared in light trap. (N. Y. Wkly. Rpt.). DELAWARE - Decreased on late field corn but very common in sweet corn ears in Sussex County. (MacCreary, Conrad). VIRGINIA - Numerous in some sorghum fields in localized areas of Eastern Shore. (Hofmaster). Medium on young alfalfa in Bland County. (Mallory, Morris). ALABAMA - Large numbers of eggs and first-instar larvae on grain sorghum in Autauga County (Grimes), and larvae moderate to heavy on same crop in Wilcox County (Hays). LOUISIANA - Light on milo in Tensas Parish. (Spink). TEXAS - Caused considerable damage in pastures in Walker County. (Randolph). OKLAHOMA - Occurred with corn earworm in sorghum heads in southwestern counties. Numbers less than in 1957. (VanCleave, Hatfield).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - VIRGINIA - Numerous in some sorghum fields and on cole crops and damaged tomatoes and peppers in eastern area. (Hofmaster).

CORN ROOTWORMS (Diabrotica spp.) - WISCONSIN - D. longicornis adults very numerous in some Columbia County sweet corn plantings. (Wis. Coop. Sur.). SOUTH DAKOTA - D. undecimpunctata howardi adults averaged 2 per 20 sweeps throughout State on alfalfa. (Hantsbarger, Klix).

SAP BEETLES - DELAWARE - Carpophilus lugubris numerous in corn. (MacCreary, Conrad). WASHINGTON - Carpophilus sp. adults caused light damage to sweet corn at Wapato. (Landis). MARYLAND - Numbers in corn declining in most sections. (U. Md., Ent. Dept.).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - ARKANSAS - Small larvae found on corn in areas around Morrilton and 45 percent of plants infested in a young corn field in Jefferson County. Moths continued to emerge, but no eggs found on corn plants. (Ark. Ins. Rpt.). OKLAHOMA - Approximately 8 percent of milo plants tunneled in 2 Tillman County fields. (VanCleave, Hatfield).

APPLE GRAIN APHID (Rhopalosiphum fitchii) - CALIFORNIA - Reported heavy on corn near Watsonville, Santa Cruz County. (Cal. Coop. Rpt.).

CORN LEAF APHID (Rhopalosiphum maidis) - WISCONSIN - Flight activity remained low at Madison. Most corn fields 100 percent infested, but colony sizes appeared smaller than in 1957. (Wis. Coop. Sur.). OKLAHOMA - Up to 100 per plant in scattered fields of late sorghum in southwest area. (Coppock, VanCleave).

SPIDER MITES - DELAWARE - Damage by Tetranychus atlanticus increasingly noticeable in several Sussex County soybean plantings. (MacCreary, Conrad). UTAH - Oligonychus sp. damaging corn from Utah County north through Weber County. (Davis). WASHINGTON - T. telarius infesting corn, beans, potatoes and sugar beets at Othello, Warden, Moses Lake and Quincy and more widespread than ever before observed. Damage heavy at Othello, moderate elsewhere. (Landis). OREGON - T. telarius abundant on corn in Willamette Valley. (Morrison).

LEAF-FOOTED BUG (Leptoglossus phyllopus) - ALABAMA - Increased on grain sorghum throughout central part of State. (Grimes).

CHINCH BUG (Blissus leucopterus) - ARKANSAS - Small numbers in some rice fields over the State. (Ark. Ins. Rpt.).

STINK BUGS - ARKANSAS - Occurring on rice in many areas of State. (Ark. Ins. Rpt.). LOUISIANA - Oebalus pugnax averaged 21.5 per 10 sweeps in 5 rice fields and 44 in 3 others in St. Landry Parish and 1,118 were taken in 50 sweeps in one untreated field. Growers are treating in most cases. (Spink). ALABAMA - Light to moderate on grain sorghum in Wilcox County. (Hays).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - NEBRASKA - Larvae very light, 9 per 100 sweeps, in southeast alfalfa fields. (Andersen). OKLAHOMA - Extremely light, 0-2 larvae per 10 sweeps, in alfalfa in southwestern and central areas. (Coppock, VanCleave). NEW MEXICO - Averaged 3 per 10 sweeps in Dona Ana County alfalfa fields. (N. M. Coop. Rpt.). MARYLAND - Adults and larvae more abundant than usual on alfalfa in Montgomery and Washington Counties. Larvae averaged over one per sweep at Boonsboro, Washington County. Light numbers of larvae feeding on soybeans. (U. Md., Ent. Dept.).

GREEN CLOVERWORM (Plathypena scabra) - NORTH CAROLINA - Caused light to moderate injury in over 200 acres of soybeans in Northampton County. (Scott, Farrier). VIRGINIA - Very abundant on soybeans on Eastern Shore. (Hofmaster). ARKANSAS - Present on soybeans in northeast section of State. (Ark. Ins. Rpt.). MARYLAND - Generally light on alfalfa in Washington and Montgomery Counties. Some diseased larvae noticed. (U. Md., Ent. Dept.).

VELVETBEAN CATERPILLAR (Anticarsia gemmatilis) - DELAWARE - First larva of season taken on Sussex County red clover. (MacCreary, Conrad). VIRGINIA - Few moths taken in light trap nightly on Eastern Shore, but not enough to cause heavy infestation. (Hofmaster). LOUISIANA - Numbers on soybeans considerably reduced in St. Landry Parish since beginning of treatment several weeks ago. (Spink).

WEBWORMS (Loxostege spp.) - MARYLAND - Webbing top leaves of alfalfa at Germantown. Controls applied. (U. Md., Ent. Dept.). DELAWARE - L. similalis larvae remained common in some alfalfa plantings throughout State. (MacCreary, Conrad). VIRGINIA - Probably L. similalis medium on alfalfa in Bland County. (Morris, Mallory). NEBRASKA - L. commixtalis averaged 10 per 100 sweeps in southeastern portion of State, with some webbing noticeable in alfalfa fields. (Andersen). OKLAHOMA - Populations in alfalfa reduced considerably in past 2 weeks. (Coppock, VanCleave). CALIFORNIA - L. sticticalis medium locally on alfalfa in Yolo County. (Cal. Coop. Rpt.).

A WEBWORM - IDAHO - Damaged fall-seeded alfalfa in Canyon County. About half of an 11-acre field examined will require seeding. (Scott).

BLACK BLISTER BEETLE (Epicauta pennsylvanica) - SOUTH DAKOTA - In alfalfa, averaged 16 per 20 sweeps in east central district and 14 in central district. (Hantsbarger, Klix).

JAPANESE BEETLE (Popillia japonica) - NORTH CAROLINA - Caused 5 percent loss of total foliage and 50 percent loss of top leaves of soybeans in Duplin County. (Reid, Farrier).

MEXICAN BEAN BEETLE (Epilachna varivestis) - MARYLAND - Adults and larvae light on soybeans at Boonsboro and Aquasco. (U. Md., Ent. Dept.).

STRIPED FLEA BEETLE (Phyllotreta striolata) - SOUTH DAKOTA - Averaged up to 40 per 20 sweeps in some scattered alfalfa fields in west central district. (Hantsbarger, Klix).

PEA APHID (Macrosiphum pisi) - NEBRASKA - Averaged 160 per 100 sweeps in southeastern alfalfa and red clover fields. (Andersen). DELAWARE - Increased greatly in alfalfa through State. (MacCreary, Conrad). UTAH - Populations vary from light to damaging in alfalfa. (Knowlton). WASHINGTON - Averaged

over 100 per sweep in alfalfa at Othello. (Landis). MARYLAND - Increased steadily on alfalfa in central and western parts of State. (U. Md., Ent. Dept.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - UTAH - Building up in several southern and south central counties. (Knowlton). OKLAHOMA - Remained low generally, 40-100 per 10 sweeps in southwestern counties and 20-75 in central counties. (Coppock, VanCleave). NEW MEXICO - Generally light and spotted in Eddy and Chaves County alfalfa fields. (N. M. Coop. Rpt.).

ALFALFA PLANT BUG (Adelphocoris rapidus) - NEBRASKA - Moderate in southeast counties. Averaged 20 per 100 sweeps in alfalfa. (Andersen). DELAWARE - Averaged 3 per sweep in a Kent County alfalfa field and 5 per 10 sweeps in a Sussex County field. (MacCreary, Conrad).

FALSE CHINCH BUGS (Nysius spp.) - SOUTH DAKOTA - Nymphs averaged 8 per 20 sweeps in alfalfa fields in southwest and south central districts. (Hantsbarger, Klix).

LYGUS BUGS (Lygus spp.) - WISCONSIN - Heavy adult and nymphal populations observed on goldenrod in northern districts. (Wis. Coop. Sur.).

MEADOW SPITTLEBUG (Philaenus leucophthalmus) - MARYLAND - Adults abundant in Montgomery and Washington County alfalfa fields. (U. Md., Ent. Dept.).

POTATO LEAFHOPPER (Empoasca fabae) - NEBRASKA - Averaged 12 per 100 sweeps in alfalfa and red clover fields in southeast counties. (Andersen). DELAWARE - Increase noted on alfalfa throughout State. (MacCreary, Conrad). MARYLAND - Abundant on young alfalfa in Washington County, particularly on field borders. (U. Md., Ent. Dept.).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - TEXAS - Averaged 20-35 per 5 sweeps in alfalfa in Brazos County. (Randolph). NEW MEXICO - Averaged 3 per sweep in alfalfa fields in Dona Ana County. (N. M. Coop. Rpt.).

RED-NECKED PEANUTWORM (Stegasta basqueella) - OKLAHOMA - Fourth-generation larvae ranged 60-70 per 100 peanut terminals in north central and south central counties. (Walton).

SUGARCANE BORER (Diatraea saccharalis) - LOUISIANA - Egg masses averaged 8 per 100 plants in 6 untreated experimental fields. Larvae averaged 116 per 100 plants, infesting 66 percent of plants examined. (Spink).

CHINCH BUGS (Blissus spp.) - MISSISSIPPI - Continued to cause serious damage to St. Augustine grass lawns in southern portion of State. (Hutchins). ALABAMA - B. leucopterus insularis extremely heavy on St. Augustine grass in Mobile County. (Self).

A GRASSWORM (Mocis latipes) - ALABAMA - Heavy on pasture crops in Wilcox County. (Hays).

WHITE GRUBS (Phyllophaga spp.) - UTAH - Serious on many lawns in Salt Lake City and in Salt Lake County. Also damaging in Logan. (Knowlton).

FRUIT INSECTS

CODLING MOTH (Carpocapsa pomonella) - CALIFORNIA - Locally heavy in peach in Yuba City, Sutter County. From pear in San Ysidro, San Diego Co. (Cal. Coop. Rpt.). UTAH - Damaging in most San Juan, Grand, Carbon, Emery and Duchesne County apple orchards. Well controlled in few commercial orchards. (Knowlton). MISSISSIPPI - Reported damaging pears in Bolivar County. (Hutchins). MICHIGAN - Activity is sporadic. (Hutson). WISCONSIN - First and second-instar larvae, also eggs comprise light to moderate population in Door County. (Wis. Coop. Sur., Aug. 28).

RED-HUMPED CATERPILLAR (Schizura concinna) - OREGON - Local infestations on apples, prunes and other fruits in Milton-Freewater area. Larvae maturing week of August 31. (Brown, Goeden)

APPLE MAGGOT (Rhagoletis pomonella) - MICHIGAN - Infestation spotty on apples. (Hutson).

ORCHARD MITES - NEW YORK - Spider mites still present in some orchards in Orleans County and some building up. (N. Y. Wkly. Rpt., Sept. 2). UTAH - Damage to apples commonly severe in Salt Lake, Box Elder, Davis and Weber County orchards. (Knowlton). WISCONSIN - Panonychus ulmi light to moderate populations. Egg laying underway. (Wis. Coop. Sur.).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - WISCONSIN - Second-generation larvae present in light to moderate numbers. (Wis. Coop. Sur.). MICHIGAN - Larvae in second and third instars active at Sparta and Coloma. (Hutson).

OYSTERSHELL SCALE (Lepidosaphes ulmi) - WISCONSIN - Appears heavier this year on central area orchard trees. (Wis. Coop. Sur.).

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - First record for San Joaquin County made at Ripon. One male taken in trap placed in black walnut, no larvae found. (Cal. Coop. Rpt.).

WESTERN GRAPE LEAF SKELETONIZER (Harrisina brillians) - NEW MEXICO - Relatively abundant on grapes in Bernalillo and Dona Ana Counties. (N. M. Coop. Rpt.). ARIZONA - Spotted infestation appearing on grapes in Graham County. In past several years it has completely defoliated grapevines in this county. No damage expected this season. (Woodruff).

A WEBWORM (Nomophila noctuella) - CALIFORNIA - Locally heavy on almonds in Chico, Butte County. (Cal. Coop. Rpt.).

WALNUT CATERPILLAR (Datana integerrima) - VIRGINIA - Severe on pecan trees in southern part of Charlotte County. Leaves severely eaten. (Haskins).

PUSS CATERPILLAR (Megalopyge opercularis) - NORTH CAROLINA - Numerous on pecan trees in Washington County. (Scott, Farrier).

FALL WEBWORM (Hyphantria cunea) - LOUISIANA - Continued as a problem on pecans throughout the State. (Spink).

Citrus Insect Situation, Lake Alfred, Florida, Fourth Week of August - PURPLE SCALE activity increased and slight increase expected first part of September. FLORIDA RED SCALE and CITRUS RED MITE activity increased. (Pratt, Thompson, Johnson).

MEDITERRANEAN FRUIT FLY (Ceratitis capitata) - FLORIDA - No finds since November 26, 1957. (Fla. Coop. Sur.).

TRUCK CROP INSECTS

CABBAGE LOOPER (*Trichoplusia ni*) - NEW MEXICO - Heavy on young lettuce throughout Dona Ana County, often with 5-10 eggs on plants having 5-6 leaves. Many growers treating at 5-day intervals. (N. M. Coop. Rpt.). CALIFORNIA - Medium on romaine lettuce in Chula Vista, San Diego County. (Cal. Coop. Rpt.).

BET ARMYWORM (*Laphygma exigua*) - OREGON - Damaged many vegetable crops in Willamette Valley through September 6. Many pupae in soil and additional brood is possible. (Morrison). NEW MEXICO - Larvae damaged young lettuce in Dona Ana County fields. (N. M. Coop. Rpt.).

BLACK CUTWORM (*Agrotis ypsilon*) - CALIFORNIA - Local heavy populations attacked cauliflower near Watsonville, Santa Cruz County. (Cal. Coop. Rpt.).

HARLEQUIN BUG (*Murgantia histrionica*) - NORTH CAROLINA - Averaged over one adult and numerous nymphs per untreated collard plant in Duplin County. (Reid, Farrier).

IMPORTED CABBAGEWORM (*Pieris rapae*) - MICHIGAN - Numerous enough on broccoli at Jackson, Stockbridge and Bath to require treatment. (Hutson). WISCONSIN - Larvae numerous in Racine-Kenosha area. (Wis. Coop. Sur.).

APHIDS - MICHIGAN - Several species becoming numerous on potatoes at Stanton and Paw Paw. (Hutson).

BET LEAFHOPPER (*Circulifer tenellus*) - UTAH - This species and curly-top disease reduced tomato yield prospects 92 percent in one Bear River Valley canning area. (Knowlton).

COLORADO POTATO BEETLE (*Leptinotarsa decemlineata*) - DELAWARE - Adults feeding lightly on tomatoes throughout State. Adults and larvae rather common on late potatoes in Sussex County. (MacCreary, Conrad). WASHINGTON - All stages caused light to moderate damage to potatoes in central part of State. (Landis).

CORN EARWORM (*Heliothis zea*) - LOUISIANA - Infesting eggplants in Tangipahoa Parish, with approximately two-thirds of a 5-acre field badly damaged. (Spink).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - DELAWARE - Late second-generation and early third-generation larvae very light to heavy in stalks and fruits of peppers, but mostly in latter, in Kent and Sussex Counties. Common also on late potatoes. (MacCreary, Conrad). MARYLAND - Caused considerable trouble in peppers in Worcester County. (U. Md., Ent. Dept.).

FALL ARMYWORM (*Laphygma frugiperda*) - DELAWARE - Larvae feeding in pepper fruits in some Sussex County fields. (MacCreary, Conrad). VIRGINIA - Numerous on cole crops on Eastern Shore and damaged tomatoes in same area. (Hofmaster).

GREEN PEACH APHID (*Myzus persicae*) - IDAHO - Occurred in all potato seed fields in Grace-Ashton, Teton Basin and Lost River areas. Averaged up to 2 per leaf in Grace-Ashton area and 0.5 per leaf in Teton Basin and Lost River areas. Syrphid flies built up in more heavily infested fields in Ashton area and will probably prevent further aphid build up. (Bishop). WASHINGTON - Moderate on potatoes at Quincy. Heavy flight August 21-28. (Landis). MARYLAND - Heavy on pepper plants in some fields in northern Worcester County. (U. Md., Ent. Dept.).

HORNWORMS (Protoparce spp.) - DELAWARE - Feeding heavily in tomatoes, potatoes and peppers throughout Sussex County and caused light to moderate damage on tomatoes in Kent and New Castle Counties. (MacCreary, Conrad). NEW MEXICO - Damaged chili and tomatoes throughout State. (N. M. Coop. Rpt.). MARYLAND - Eggs and larvae moderate to heavy on peppers in Worcester County. Controls required in many instances. (U. Md., Ent. Dept.).

LOOPERS - VIRGINIA - Increased on all crops on Eastern Shore. Averaged 4 larvae and 10 eggs per leaf on broccoli. Tomatoes, peppers and cucumbers damaged. Spraying lowered to 5-day schedule. Light trap catches dropped from high of 179 to 15 on August 25. (Hofmaster).

PEPPER MAGGOT (Zonosemata electa) - NEW JERSEY - Earliest peppers 100 percent infested in central area. Few eggs still present. (Merrill).

POTATO LEAFHOPPER (Empoasca fabae) - MICHIGAN - Populations remained low. (Hutson). DELAWARE - Very common on late potatoes in central Kent County. (MacCreary, Conrad). CALIFORNIA - Light on potato foliage at Watsonville, Santa Cruz County. (Cal. Coop. Rpt.).

POTATO PSYLLID (Paratrioza cockerelli) - UTAH - Damage generally light, but more severe in St. George-Santa Clara area of Washington County. (Knowlton). WYOMING - Averaged 6 adults per 100 sweeps in potatoes in Laramie and Goshen Counties. (Davison).

WHITEFLIES - WASHINGTON - Aleyrodes spiraeoides and Trialeurodes abutilonea increased, caused moderate damage to potatoes and various weeds in central area of State. All stages present. Populations predominantly A. spiraeoides. (Landis).

BEAN APHID (Aphis fabae) - WASHINGTON - Practically non-existent in contrast to great abundance in 1957 in central part of State. (Landis).

MEXICAN BEAN BEETLE (Epilachna varivestis) - WYOMING - Completely defoliated many bean fields in Laramie, Goshen and Platte Counties. Adults and pupae very numerous among fallen leaves. Crop being harvested. (Davison).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - DELAWARE - Prevalent in flowers of some Kent and Sussex County pumpkin-squash. (MacCreary, Conrad).

ASPARAGUS BEETLE (Crioceris asparagi) - DELAWARE - Larvae heavy on asparagus ferns in some Kent and Sussex County plantings. (MacCreary, Conrad).

ASPARAGUS MINER (Melanagromyza simplex) - DELAWARE - New mines becoming increasingly more evident in asparagus plantings. (MacCreary, Conrad).

CARROT WEEVIL (Listronotus oregonensis) - NEW JERSEY - Heavily attacked parsley and carrots in all areas. (Merrill).

ONION MAGGOT (Hylemya antiqua) - MICHIGAN - Late injury to onions appears extremely spotty at harvest. Single fields seriously damaged at Hooper, Hudsonville and Allegan. (Hutson).

SPIDER MITES - WASHINGTON - Probably Tetranychus telarius, severely damaged raspberries in Puget Sound area. (Telford).

STRAWBERRY LEAF ROLLER (Ancyliis comptana fragariae) - WISCONSIN - First and second-instar larvae of second generation in moderate numbers in Door County August 29. (Wis. Coop. Sur.).

TOBACCO INSECTS

GREEN PEACH APHID (*Myzus persicae*) - MARYLAND - Generally light on tobacco in St. Marys County. (U. Md., Ent. Dept.).

HORNWORMS (*Protoparce* spp.) - MARYLAND - Eggs continued abundant on tobacco in St. Marys County. Larval damage light. (U. Md., Ent. Dept.).

TOBACCO FLEA BEETLE (*Epitrix hirtipennis*) - VIRGINIA - Severe on some tobacco in southern Charlotte County. Excessive rain prevented control. Leaves filled with holes. (Haskins).

COTTON INSECTS

APHIDS - ALABAMA - *Aphis gossypii* extremely heavy on cotton in northern area of State. Almost all leaves heavily infested in one field. (Grimes). TENNESSEE - Heavier in succulent cotton. Some control needed to prevent lint injury in many fields. (Locke). ARKANSAS - Numbers on cotton increased. (Ark. Ins. Rpt.). NEW MEXICO - *A. gossypii* generally light in cotton-growing areas, with some moderately heavy infestations. Honeydew becoming problem in few fields. (N. M. Coop. Rpt.).

BOLL WEEVIL (*Anthonomus grandis*) - ALABAMA - Migration at peak in central part of State, increased in north. As many as 3-4 punctures per boll in unprotected fields where bolls are half-grown. (Grimes). LOUISIANA - Infestation averaged 15 percent in 33 fields in Grant Parish, 14.5 percent in 75 Morehouse Parish fields, 20 percent in 36 fields in Rapides Parish and 14 percent in 42 fields and ranged 4-61 percent in 8 other fields in Tensas Parish. Averaged 36 percent in 30 fields in Franklin Parish and 12 percent in 56 fields in Ouachita Parish. (Spink). SOUTH CAROLINA - Continued to increase in all maturing fields. Caused serious damage in unprotected late cotton. Migration reported in upper Piedmont counties. (Cott. Lett.). TENNESSEE - Migration continued into succulent cotton. Considerable damage can be expected to small bolls if infestations are not controlled. Many fields passed damage stage. Ground control difficult due to rank cotton. Survey confined to heavier infested portion of State, with average of 54 percent punctured squares. (Locke). ARKANSAS - Continued to emerge in some areas. Fourth generation appearing. Migration continued from older to younger cotton. Squaring cotton not safe from boll damage. (Ark. Ins. Rpt.). OKLAHOMA - Sharp reduction in activity in southwestern area. Less than 5 percent punctured squares in most fields checked. Upland cotton has stopped squaring. (VanCleave, Hatfield).

BOLLWORMS (*Heliothis* spp. et al.) - ALABAMA - Populations decreased considerably in past 7 days, however larvae caused severe damage to large cotton bolls in northern part of State. (Grimes). LOUISIANA - Infestation averaged 4.9 percent in 33 fields in Grant Parish, 7.8 percent in 36 fields in Rapides Parish, 2 percent in 42 Tensas Parish fields and averaged 3.9 percent in Morehouse Parish. Eggs ranged 5-40 per 100 squares and 3-16 per 100 terminals. Infestation averaged one percent in 30 Franklin Parish fields and 3 percent in 56 Ouachita Parish fields. (Spink). SOUTH CAROLINA - Continued active throughout most of State. Serious damage reported from Blackville, Barnwell County, to some of upper western counties. (Cott. Lett.). TENNESSEE - Adults remained active. Egg counts ranged 0-16 per 100 terminals. (Locke). ARKANSAS - Adults continued to emerge in large numbers and egg counts on cotton extremely high in some areas, with one report of 332 eggs per 100 terminals. This is one of highest egg counts recorded. (Ark. Ins. Rpt.).

OKLAHOMA - Damage generally 2-8 percent in irrigated cotton in southwest. Lighter in upland cotton. (VanCleave, Hatfield). NEW MEXICO - Appeared to be declining in most counties, except for several moderately heavy infestations in Eddy and Hidalgo Counties. (N. M. Coop. Rpt.). TEXAS - Generally light in west cross timbers area with isolated medium to heavy infestations in northwest, north plains and south plains areas. (Gaines).

CABBAGE LOOPER (*Trichoplusia ni*) - ARKANSAS - Defoliated cotton in some areas. (Ark. Ins. Rpt.). NEW MEXICO - Light in cotton fields in Chaves, Eddy, Lea, Dona Ana, Luna and Hidalgo Counties. (N. M. Coop. Rpt.). TEXAS - Light in isolated sections in northwest and south plains areas. (Gaines).

COTTON LEAFWORM (*Alabama argillacea*) - SOUTH CAROLINA - Reported for first time this season. Moths caught in Pee Dee and Clemson light traps. Adults reared from larvae collected in Clarendon County in August. (Cott. Lett.). NEW MEXICO - Occasional larva found in cotton fields in Dona Ana and Chaves Counties. (N. M. Coop. Rpt.).

PINK BOLLWORM (*Pectinophora gossypiella*) - OKLAHOMA - Recovery of one dead larva from inspection of 10 gin stands and one lint cleaner at 2 localities in Tillman County, September 5, was first report for State this season. (Hatfield). ARIZONA - Inspection of 456 green cotton bolls in 2 fields in Graham County recovered 3 live, half-grown larvae in one boll from the field at Solomon. The field at Safford showed negative results. (Woodruff, Aug. 18). No new infested cotton fields detected in past 10 days. (Woodruff, Sept. 2).

SPIDER MITES - ALABAMA - Caused serious damage to northern area cotton. Where not controlled, cotton almost completely defoliated and has been picked one to two weeks early. Yield has been reduced. (Grimes). SOUTH CAROLINA - Defoliated cotton in all counties where control was not used. Generally, most infestations are aiding in defoliation of rank cotton. (Cott. Lett.). TENNESSEE - Predators more numerous than any time this season. (Locke). ARKANSAS - Present in a large number of fields, but numbers decreased within individual fields. (Ark. Ins. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SOUTHERN PINE BEETLE (*Dendroctonus frontalis*) - NORTH CAROLINA - Aerial survey indicates epidemic in Tyrrell County. Slight increase in area in Hyde County and only moderate increase in tree mortality. Limited control attempted by few landowners. (Green).

WHITE-PINE WEEVIL (*Pissodes strobi*) - NORTH CAROLINA - Infestations in scattered patches of white pine varying from one-fourth acre to one acre in Buncombe, McDowell, Mitchell and Polk Counties. (Shaw).

IPS BEETLES (*Ips* spp.) - NORTH CAROLINA - Infestation in one-fourth acre areas of pine in Bladen County. (Green).

A MIDGE (*Retinodiplosis inopis*) - CALIFORNIA - The midge reported in CEIR 8(35):769 is the above species. It has been in an epidemic status in the Mt. Shasta brushfield planting for the past two years and has caused considerable damage to ponderosa pine during this period. (Hall).

RED-HEADED SAWFLY (*Neodiprion lecontei*) - WISCONSIN - Larvae defoliating a Vernon County jack pine planting where trees were 4 feet tall on August 29. Feeding also occurred on the bark of twigs. (Wis. Coop. Sur.). LOUISIANA - Light on long leaf pine in Livingston Parish. (Spink).

A GALL WASP (Callirhytis sp.) - MISSISSIPPI - A serious infestation on willow oak in Humphreys County. (Hutchins).

ORANGE-STRIPED OAKWORM (Anisota senatoria) - RHODE ISLAND - Larvae heavy on oak locally at Providence and North Kingstown. (Mathewson, Hansen).
MARYLAND - Damaging oaks at La Plata. (U. Md., Ent. Dept.).

OAK SKELETONIZER (Bucculatrix ainsliella) - MISSISSIPPI - Seriously damaging oak in Greenville. (Hutchins).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - WISCONSIN - Numerous and active. As of September 3, a total of 1741 cases of Dutch elm disease found. (Wis. Coop. Sur.).

ELM LEAF BEETLE (Galerucella xanthomelaena) - IDAHO - Continues nuisance in Twin Falls area. Large number of adults now appearing. (Gibson).
OKLAHOMA - Heavy egg laying in Stillwater area; 3 generations completed. Adults invaded many homes in central and east central sections. (Howell).

ORIENTAL MOTH (Cnidocampa flavescens) - MASSACHUSETTS - Severely defoliating leaves of a small Norway maple at East Cambridge, August 25. This is the first record of activity of this species since 1954 in the State. (Perry).

MIMOSA WEBWORM (Homadaula albizziae) - VIRGINIA - Severe on honeylocust in Norfolk County. (Harrell).

MITES - WISCONSIN - Spider mite damage appears quite general to many ornamental evergreens. (Wis. Coop. Sur.). CALIFORNIA - Oligonychus platani heavy on sycamore at Riverside, Riverside County. (Cal. Coop. Rpt.).

ORANGE TORTRIX (Argyrotaenia citrana) - CALIFORNIA - Heavy infestation on gladiolus at Watsonville, Santa Cruz County. (Cal. Coop. Rpt.).

SCALE INSECTS - VIRGINIA - Diaspis carueli building up in several nurseries in Norfolk County and severe on several junipers in the area. (Harrell).
Unaspis euonymi heavy on euonymus throughout Fluvanna County (Morris, Smith) and in Arlington and Bedford Counties. (Rowell, Boone). CALIFORNIA - Toumeyella pinicola heavy on Monterey pine at Watsonville, Santa Cruz County. Aspidiotus juglans-regiae heavy on ash in El Cajon, San Diego County. (Cal. Coop. Rpt.).

INSECTS AFFECTING MAN AND ANIMALS

BLACK WIDOW SPIDER (Latrodectus mactans) - DELAWARE - Fairly common in various sections of State. (MacCreary, Conrad).

MOSQUITOES - WISCONSIN - Severe in Rusk County and in some other northern localities. In southern sections populations lower than for past 5 years. (Wis. Coop. Sur.). UTAH - Mosquitoes seriously annoying in parts of Box Elder, Davis and Cache Counties. Many cases of encephalitis reported from persons and horses in several counties. Control applied in northern counties where encephalitis present. (Knowlton). NEW MEXICO - Very annoying around homes in Dona Ana County. (N. M. Coop. Rpt.).

FLIES - WISCONSIN - Reports from 118 barns in 10 counties for week ending August 31 showed horse flies to be more of a problem than heretofore, but stable flies and horn flies to be the worst problem. (Wis. Coop. Sur.).

UTAH - Flies annoying cattle and horses severely in many parts of 7 counties. House flies seriously abundant throughout Box Elder County and annoyance common at county fairs. Infestations common in small restaurants and some grocery stores. (Knowlton). OKLAHOMA - Horn fly and stable fly populations in Stillwater area up slightly from last week of August, but house fly down slightly. (Howell).

STORED-PRODUCT INSECTS

SAW-TOOTHED GRAIN BEETLE (*Oryzaephilus surinamensis*) - UTAH - Common pest in Uintah County granaries, wherever grain has been carried over from 1957. (Knowlton).

BENEFICIAL INSECTS

PARASITES AND PREDATORS - SOUTH DAKOTA - *Nabis* spp. adults averaged 5 per 20 sweeps in alfalfa throughout the State and *Hippodamia* spp. adults 2 per 20 sweeps in same crop. (Hantsbarger, Klix). OKLAHOMA - Lacewings common in alfalfa, 4-35 per 10 sweeps, throughout State. *Collops* sp. also common in same crop statewide. (Coppock, VanCleave).

MISCELLANEOUS INSECTS

ASIATIC OAK WEEVIL (*Cyrtopistomus castaneus*) - VIRGINIA - Heavy around Richmond area, and abundant on oaks on Eastern Shore. (Willey). Very heavy around a house in Orange County and appeared by thousands on windows. Air pressure hose used to blow pests off motors of cars at filling station. Swept up by gallons each night. Heavy around few homes in several counties. Plentiful on flue-cured tobacco in Lunenburg County. Of doubtful economic importance on this crop. (Rowell, et al.). MARYLAND - Adults on soybeans at Aquasco and upon alfalfa at various localities in Montgomery and Washington Counties. No apparent damage. (U. Md., Ent. Dept.).

LESSER MEALWORM (*Alphitobius diaperinus*) - CALIFORNIA - Heavy infestation in chicken manure at Terra Bella, Tulare County. (Cal. Coop. Rpt.).

A LEAF MINER (*Melanagromyza virens*) - CALIFORNIA - June-seeded experimental plantings of safflower grown at the University of California, Davis, Yolo County, 100 percent infested. No reports of infestations in commercial plantings. (Cal. Coop. Rpt.).

EUROPEAN EARWIG (*Forficula auricularia*) - UTAH - A camp site of 13 acres at Bear Lake, Rich County, severely overrun with the pest during the past season. (Knowlton).

BOXELDER BUG (*Leptocoris trivittatus*) - UTAH - Populations high about many Cache, Weber, Salt Lake and Utah County homes. (Knowlton).

COCKROACHES - UTAH - Problem in homes and motels in Washington, Davis and Utah Counties. (Knowlton).

GIANT HORNET (*Vespa crabro germana*) - DELAWARE - Quite common throughout State. (MacCreary, Conrad).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Protoparce sexta	quinq.	Heliothis zea	vires.
ALABAMA									
Crossville 9/1,3	37	9			18		27	120	
ARKANSAS									
Fayetteville 8/21-9/3	60	60		9	159			189	
Hope 8/21-9/3	9	2			4			32	
Kelso 8/21-9/3	2	8			11			56	
Morrilton 8/14-20	34	61						251	
Osceola 8/21-27								65	
Stuttgart 8/21-9/3								24	
FLORIDA									
Gainesville 8/25						1		1	
Quincy 8/19						47		2	96
ILLINOIS									
Urbana 8/29-9/4	18		9	15	1			46	
INDIANA(County)									
Tiptecanoe 8/26-9/3	79	12	4	19		1		149	
LOUISIANA									
Baton Rouge 8/29-9/5	15	14	9	1	148			44	
Franklin 9/1		2	1		17				
Shreveport 9/1,3	24	9	2		77		3	98	
MISSISSIPPI									
Grenada 8/25-30	6	4						3	
Senatobia 8/21-29	12	12			5			12	
*State College 8/30-9/5	31	101	41	3	173	4	1	159	2
*Stoneville 8/29-9/4	69	15	39		191	23		256	1
NORTH CAROLINA									
Clayton 8/29-9/4	15	9	4			1		13	2
Faison 8/29-9/4	34	7	25			11	7	16	4
SOUTH CAROLINA									
Clemson 8/30-9/5	140	62	48	9	76	14	4	42	2
Charleston 8/25-9/7	134	30	67		285	47	7	606	14
Florence 8/24-30	211	47	333	5	203	103		1024	100
TENNESSEE(Counties)									
Blount 8/19-9/1	108	220	164	12	60	9	7	92	
Cumberland 8/19-9/1	41	33	32	8	11	71	57	64	
Greene 8/19-9/1	147	149	199	28	56	28	62	83	
Johnson 8/19-9/1	686	260	262	124	226	1		60	
Madison 8/19-9/1	282	142	82	8	36	27	8	1325	
Mauzy 8/19-9/1	244	184	220			98	64	144	
Robertson 8/19-9/1	53	16	84	8	12	34	48	364	
TEXAS									
Waco 8/30-9/5	46		16	22				681	1

*MISSISSIPPI - Two traps State College; 4 traps - Stoneville.

LIGHT TRAP COLLECTIONS - Continued

CORN EARWORM (Heliothis zea) - WISCONSIN - 8/26-9/3: *Arlington - 75; Astico - 5; Berlin - 114; Janesville - 2; LaCrosse - 8; Middleton - 3; Platteville - 26; Ripon - 12; River Falls - 3; Rosendale - 24; *Teresa - 36; Waterford - 3.

POTATO LEAFHOPPER (Empoasca fabae) - INDIANA - Tippecanoe County - 8/27-9/3: 1481.

*Wisconsin - Three traps - Arlington and Theresa.

ADDITIONAL NOTES

KANSAS - Local migration flights of Melanoplus bilituratus observed in Meade County. Populations heavy in volunteer wheat fields in localized areas of county, with 35-50 per square yard. Wheat practically destroyed in some fields. Heliothis zea averaged 1-3 per head in grain sorghum fields surveyed in Finney, Haskell and Meade Counties. Some fields sprayed, others may be. (DePew).

NORTH DAKOTA - Survey in southwest part of State showed high populations of BLACK BLISTER BEETLE in many alfalfa fields. Webbing of FALL WEBWORM noticeable on shade and fruit trees at scattered locations. (N. D. Ins. Rpt.).

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SEPTEMBER 19, 1958

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Cooperative
ECONOMIC INSECT
REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearinghouse and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GRASSHOPPERS remained a problem in many areas of New Mexico. (p. 811).
Threatening to severe in several localized areas of southwestern Kansas. (p. 815).

EUROPEAN CORN BORER severe in grain sorghum in Westmoreland County, Virginia.
(p. 811).

CABBAGE LOOPER serious on cabbage in areas of Oregon. (p. 816).

FLEAS BEETLES damaging potatoes in several states. (p. 817).

ORANGE-STRIPED OAKWORM caused heavy defoliation of woodlands in Connecticut.
(p. 819). New outbreak of FIR ENGRAVER on 5,000 acres of white fir in New Mexico.
(p. 819).

ADDITIONAL NOTES. (p. 815).

INSECTS not known to occur in the United States. (p. 823).

WEATHER BUREAU 30-DAY OUTLOOK

MID-SEPTEMBER TO MID-OCTOBER 1958

The Weather Bureau's 30-day outlook for the period mid-September to mid-October calls for temperatures to average above seasonal normals over the southeastern quarter of the nation, Texas and in the area from the Ohio Valley eastward through the Middle Atlantic States. Near normal temperatures are indicated for New England and states bordering the eastern Great Lakes. Over the western half of the country below normal temperatures are anticipated, except for above normal along the West Coast. This country-wide temperature pattern marks a reversal from that of the past 30 days when unseasonably cold weather dominated the East and warm weather the West. Precipitation is expected to exceed normal over most of the area lying between the Appalachians and the Continental Divide. Subnormal amounts are expected over the Southeast and far Southwest. Otherwise, about normal precipitation is indicated.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 a half year.

WEATHER OF THE WEEK ENDING SEPTEMBER 15

This week, although pleasant and sunny over much of the Nation, managed to produce some unseasonable temperature extremes, ranging from record lows for so early in the season of 49° at Chattanooga, Tennessee and 35.9° at Hartford, Connecticut, to a record high for so late in the season of 97° at Glasgow, Montana. Temperatures averaged below normal from the Mississippi Valley eastward and above normal to the west, except for interior California and parts of southern Oregon and western Nevada. For the most part precipitation amounts were generally under $\frac{1}{2}$ inch, except in sections of the Mississippi Valley and the southern tier of states from Arizona eastward. Tropical storm Fifi, early last Tuesday was 560 miles south-southwest of Bermuda. This storm finally curved out over the Atlantic without affecting the United States. Another tropical storm, Gerda, developed in the Caribbean, passed Puerto Rico the night of the 13th, and after crossing the western tip of Haiti on the 15th diminished in activity. Unseasonably warm temperatures prevailed over the northern Rocky Mountain States until cool air, spilling out of Canada, first brought temperatures typical of mid-October to the upper Mississippi and Ohio Valleys and the Great Lakes region by mid-week and later to some other sections of the country. Showers and thunderstorms developed along the boundary of cool and warm air as it pushed southeastward. On the 10th, 5.20 inches of precipitation fell at Mountain View, Arkansas, on the 12th, 4.37 inches at Franklinton, Louisiana, and on the 13th, 4.00 inches at Key West, Florida. Clear skies resulted in dense morning fog in the upper Ohio Valley and along the western side of the Appalachians ahead of the front on the 9th. During the week, temperatures near freezing were reported in most States from West Virginia northward and some frost occurred, particularly in low-lying susceptible places. Freezing temperatures were reported in the cranberry bogs of New Jersey on the 12th and 13th.

Temperatures of 100° or higher were reported from Pierre, South Dakota on the 8th, and in the southwestern desert nearly every day. However, higher pressure pushing into the West resulted in considerable cooling after midweek and even the desert regions of the Far Southwest were affected, with temperatures failing to warm up to the 100° mark on the afternoon of the 13th and minima the next morning dropping generally to the 50's and 60's with near freezing in parts of Arizona. This high pressure produced fair weather in the West by the 14th.

Weather of the Week continued on page 822.

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - ALABAMA - Several species caused moderate damage to grain sorghum in Chambers County. (Barwood). NORTH DAKOTA - Completed adult survey shows non-economic levels over most of State. Threatening in northeastern Divide, northwestern Burke and south central Bowman Counties. Dominant species is Melanoplus bivittatus, with M. bilituratus and M. femur-rubrum following in about equal numbers. (N. D. Ins. Rpt.). TEXAS - Several species attacked fall-sown wheat in Moore County. (Garner). UTAH - M. femur-rubrum remained locally numerous in some grassy fields and roadsides in Wayne, Sevier and Cache Counties. Non-economic in many localities. Some egg-laying occurred. (Knowlton). COLORADO - M. bilituratus dominant species. Second-generation nymphs averaged 15-25 per square yard on rangeland and adults 10-30 in 14 counties in eastern half of State. (ARS, Ext. Serv.). NEW MEXICO - Remained a problem in many areas of State. Caused minor damage to sorghum heads, tips of corn ears and alfalfa in Maxwell-Springer area, Colfax County, destroyed young grain stands along margins of wheat fields near Mosquero, Harding County. Replanting necessary in some areas. Control being applied near Cerro, Taos County. (N. M. Coop. Rpt.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - VIRGINIA - Severe in grain sorghum in Westmoreland County, with approximately 90 percent of stalks beginning to break at point of entry. (Ptucha). ALABAMA - Moderate on grain sorghum in northern part of State. (Grimes). SOUTH DAKOTA - Infestation averaged 53 percent in northeast district with 108 first to fifth-instar larvae per 100 plants and 65 percent in north central district with 151 fourth and fifth-instar larvae per 100 plants. (Klix, Hantsbarger).

CORN EARWORM (Heliothis zea) - MARYLAND - Larvae light on pods of late soybeans in Dorchester and Worcester Counties. (U. Md., Ent. Dept.). DELAWARE - Decreased in field corn throughout State, but small larvae became noticeable in alfalfa and soybeans. (MacCreary, Conrad). ALABAMA - Moderate to heavy infestations caused serious damage to grain sorghum in central and northern parts of the State. (Grimes). OKLAHOMA - In milo, averaged 1-7 per head in McClain and Garvin Counties (VanCleave, Pennington), 1-4 per head in Bryan County (VanCleave, Vick) and 1-7 per head in Carter County, with almost 100 percent of corn ears infested. Early maturing corn severely damaged by side entry. (Arbuthnot). Averaged 1-3 per 10 sweeps in alfalfa in Grady and Garvin Counties. (VanCleave, Pennington). IDAHO - Infestation of late-maturing sweet and field corn ears approaching 100 percent in Canyon County, with 2-3 larvae per ear common. (Waters). UTAH - Moderate in Wayne County corn, heavier in Sevier County. All field corn examined infested. (Knowlton). COLORADO - Infested 50 percent of ears in Prowers, Bent, Otero, Crowley and Pueblo Counties. (Exp. Sta.). NEW MEXICO - Heavy, nearly 100 percent infestation, in early-planted corn but much less in later plantings, near Maxwell, Springer and Farley, Colfax County, and 80-90 percent at Moriarty and Estancia, Torrance County. (N. M. Coop. Rpt.).

FALL ARMYWORM (Laphygma frugiperda) - COLORADO - Infested 50 percent of corn ears in Prowers, Bent, Otero, Crowley and Pueblo Counties. (Exp. Sta.). DELAWARE - Continued to feed commonly in fields of late field corn throughout State. Caused extensive damage to very late field corn in eastern Kent County. (MacCreary, Conrad). TEXAS - Damaged Bermuda and Dallisgrass pastures in Montgomery, Harris and Brazos Counties. (Garner)

SORGHUM WEBWORM (Celama sorghiella) - OKLAHOMA - In milo, averaged 2-3 per head in Garvin County, 10-35 in Bryan County and 4-5 in Carter County. (VanCleave, et al.). TEXAS - Heavy on late grain sorghums in river bottoms of Kaufman County. (Hawkins). ALABAMA - Light on grain sorghum in central and northern areas. (Grimes).

CORN FLEA BEETLE (Chaetocnema pulicaria) - TEXAS - Caused some damage to leaves of grain sorghum in Floyd County. (Hawkins).

CLOVER ROOT CURCULIO (Sitona hispidula) - CALIFORNIA - Damaged corn at Soledad, Monterey County. (Cal. Coop. Rpt.).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - TEXAS - Survey of 24 fields in 15 high plains area counties showed infestation to range 58-100 percent. (Hawkins).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Averaged 0-25 per milo stalk in Grady and Garvin Counties (VanCleave, Pennington) and the same in Jefferson County and 100-200 per stalk in Carter County (Howell). UTAH - Generally low on corn. Some damage at Sigurd, Sevier County. (Knowlton).

SPIDER MITES - COLORADO - Tetranychus telarius damage to corn increased in Prowers, Bent, Otero, Crowley and Pueblo Counties. (Exp. Sta.). TEXAS - Caused heavy damage to leaves of grain sorghum in Parmer County. (Hawkins). UTAH - Damage severe in a few Sevier County corn fields in Salina and Richfield areas. (Knowlton).

SORGHUM MIDGE (Contarinia sorghicola) - OKLAHOMA - Averaged 30-40 per flowering head in late sorghums in Payne County. (Howell).

CHINCH BUG (Blissus leucopterus) - OKLAHOMA - Averaged 300 per 400 stalks in sorghums in Bryan, Pontotoc, Garvin and Payne Counties and 2 per 10 sweeps in alfalfa in Garvin County. (VanCleave, Pennington).

FALSE CHINCH BUGS (Nysius spp.) - NEW MEXICO - Continued to damage grain sorghum fields in Quay County. Appeared to be decreasing. (N. M. Coop. Rpt.).

ENGLISH GRAIN APHID (Macrosiphum granarium) - UTAH - Light on late spring grains at Fremont and Loa, Wayne County. (Knowlton).

WHEAT CURL MITE (Aceria tulipae) - IDAHO - Very abundant on late-planted grain growing in roadways on University Agronomy Farm. Symptoms of wheat streak mosaic very apparent in these plantings. (Manis).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - CALIFORNIA - Heavy and seriously damaged alfalfa in Yuba City area of Sutter County. (Cal. Coop. Rpt.). OKLAHOMA - Averaged 1-3 per 10 sweeps in alfalfa in Grady and Garvin Counties and 1-2 in Murray County. (VanCleave, Pennington). UTAH - Common, but rarely economically injurious. (Knowlton).

ALFALFA LOOPER (Autographa californica) - SOUTH DAKOTA - Larvae averaged one per 20 sweeps in alfalfa in northeast, north central and east central areas. (Klix, Hantsbarger).

GREEN CLOVERWORM (Plathypena scabra) - DELAWARE - Small larvae common in alfalfa and noticeable on soybeans throughout most of State. (MacCreary, Conrad). OKLAHOMA - Averaged 5-20 per 10 sweeps in Garvin County alfalfa. (VanCleave, Pennington). NEBRASKA - Moderate to heavy, 22-40 per 100 sweeps, in alfalfa in southeast portion of State. (Andersen).

LESPEDeza WEBWORM (Tetralopha scortealis) - NORTH CAROLINA - Infestation in 220 acres of serica lespedeza with damage up to severe in 100 acres. (Williford, Rabb).

WEBWORMS - UTAH - Extremely numerous over more than 100 acres of range at Bicknell, Wayne County. Invaded alfalfa and potato fields. (Knowlton).

NEW MEXICO - Loxostege sp. extremely large numbers caused damage at Santa

Fe, Santa Fe County. Severe and damaged wheat at House, Quay County. Damaged flowers, shrubs and trees in Quay, Torrance and Otero Counties. (N. M. Coop. Rpt.). NEBRASKA - Averaged 20 per 100 sweeps in alfalfa in southeast portion of State. (Andersen).

ALFALFA WEEVIL (Hypera postica) - WYOMING - Averaged 2-3 larvae and 2-3 adults per 25 sweeps in many Lincoln County fields. (Davison). UTAH - Larvae more common than usual for this time of year in Sevier, Wayne and Sanpete County alfalfa fields. (Knowlton).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - WYOMING - Caused a trace of damage in red clover near Thayne, Lincoln County. (Davison).

BANDED CUCUMBER BEETLE (Diabrotica balteata) - CALIFORNIA - Light on alfalfa in Santee, San Diego County. (Cal. Coop. Rpt.).

BEAN LEAF BEETLE (Cerotoma trifurcata) - VIRGINIA - Light in soybeans in eastern part of State, not a threat to yield. (Morris).

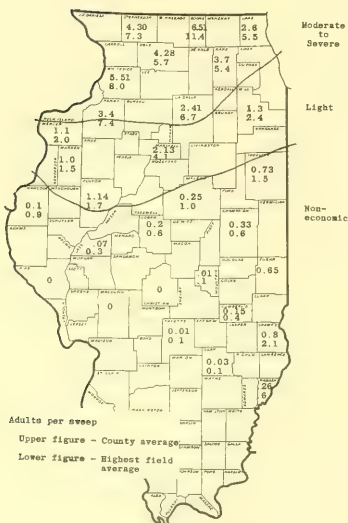
SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - VIRGINIA - Light in soybeans in eastern part of State, not a threat to yield. (Morris).

PEA APHID (Macrosiphum pisi) - DELAWARE - Heavy in most alfalfa and clover fields throughout State. (MacCreary, Conrad). NEW MEXICO - Generally light in alfalfa throughout most of State. (N. M. Coop. Rpt.). WYOMING - Variable in western part of State. Averaged 750-800 per 100 sweeps in some fields and as low as 50-100 in other fields. (Davison). MASSACHUSETTS - Increased from approximately 2 to approximately 15 per sweep in southwestern part of State. (Lavigne, Shaw). UTAH - Caused moderate damage to alfalfa in some Sevier and Sanpete County fields. Generally moderate to light in Wayne, Sevier, Sanpete, Utah, Juab and Salt Lake County alfalfa fields examined. (Knowlton). COLORADO - Averaged 200-250 per 100 sweeps in alfalfa in Prowers, Bent, Otero, Crowley, Pueblo, Larimer and Weld Counties. (Exp. Sta., Sept. 2).

SPOTTED ALFALFA APHID (Therioaphis maculata) - COLORADO - Averaged 400-600 per 100 sweeps in Prowers, Bent, Otero, Crowley and Pueblo Counties. Counts reduced by predators and controls in Mesa, Montrose, Garfield and Delta Counties, with 20-300 per 100 sweeps. (Exp. Sta.). NEW MEXICO - Moderately heavy in several alfalfa fields in Socorro and San Juan Counties. (N. M. Coop. Rpt.). CALIFORNIA - Medium in Chualar area, Monterey County. (Cal. Coop. Rpt.). OKLAHOMA - In alfalfa, averaged 100-700 per 10 sweeps in Grady and Garvin Counties and 50-100 in Murray County (VanCleave, Pennington) and 200-300 in Bryan County (VanCleave, Vick). TEXAS - Light to medium in Hale County alfalfa. (Hawkins). UTAH - Migration now as far north as Salt Lake, Tooele and Carbon Counties. Specimens mostly winged in more northern collections. (Knowlton). NEBRASKA - Continued to spread north and eastward. Few numbers present at North Platte, Lincoln County, and as far east as Thayer County. Heaviest in Republican Valley area south of McCook, Red Willow County. Ranged up to 200 per sweep in this area. (Hill, Howe).

LYGUS BUGS (Lygus spp.) - NEW MEXICO - Averaged one adult and 12 nymphs per sweep in Socorro County alfalfa fields. Averaged 2 per sweep in alfalfa fields around Los Lunas, Valencia County. (N. M. Coop. Rpt.). MARYLAND - L. lineolaris adults and nymphs averaged 2 per sweep on alfalfa at Ellicott City, Howard County. (U. Md., Ent. Dept.). SOUTH DAKOTA - Nymphs and adults averaged 24 per 20 sweeps on alfalfa in north central and northeast areas, with up to 75 per 20 sweeps in one locality in Roberts County. In east central area averaged 31 nymphs and adults per 20 sweeps. (Klix, Hantsbarger). WYOMING - Averaged 24 per 25 sweeps in Lincoln County red clover and 6-18 per 25 sweeps in seed alfalfa in Riverton area of Fremont County. (Davison). UTAH - Numerous in some alfalfa fields in Juab, Sevier and Wayne Counties. Light on potatoes in Wayne County. (Knowlton). NEBRASKA - L. lineolaris heavy in those alfalfa fields left for seed in southeast area. Ranged 26-55 per 100 sweeps. (Andersen).

Potential Spittlebug Situation for Spring 1959 in Illinois



MEADOW SPITTLEBUG (*Philaenus leucophthalmus*) - MARYLAND - Adults averaged 6 per sweep on alfalfa at Ellicott City. (U. Md., Ent. Dept.).

PLANT BUGS - MARYLAND - *Adelphocoris rapidus* adults averaged 2 per 10 sweeps on alfalfa at Ellicott City, Howard County. (U. Md., Ent. Dept.).

NEBRASKA - *A. lineolatus* counts ranged 15-25 per 100 sweeps and *A. rapidus* 5-20 per 100 sweeps on alfalfa in southeast portion of State. (Andersen).

CLOVER LEAFHOPPER (*Aceratagallia sanguinolenta*) - SOUTH DAKOTA - Averaged 19 per 20 sweeps on northeast area alfalfa, 28 in north central and 17 in east central areas. (Klix, Hantsbarger). UTAH - *Aceratagallia* sp. common in alfalfa fields in Wayne, Sevier and Utah Counties. (Knowlton).

POTATO LEAFHOPPER (*Empoasca fabae*) - MASSACHUSETTS - Exceptionally light, averaged 5-15 per 100 sweeps. (Lavigne, Shaw).

THREE-CORNERED ALFALFA HOPPER (*Spissistilus festinus*) - LOUISIANA - Total of 141 adults and 18 nymphs taken in 100 sweeps in soybeans, St. Landry Parish. (Spink). OKLAHOMA - Averaged 6-8 per 10 sweeps in Bryan County alfalfa (VanCleave, Vick), 4-6 in Murray County (VanCleave, Pennington). TEXAS - Averaged 2 per sweep in Hale County alfalfa. (Hawkins).

A CHINCH BUG (*Blissus leucopterus insularis*) - ALABAMA - Caused severe damage to St. Augustine grass lawns in Montgomery County. (Blackwell).

CUTWORMS - NEVADA - Heavy in clover and dichondra lawns in Las Vegas, Clark County. (Zoller, Sept. 5).

NORTHERN MASKED CHAFER (*Cyclocephala borealis*) - MARYLAND - Larvae active in turf at Lanham, Prince Georges County. (U. Md., Ent. Dept.).

WHITE FRINGED BEETLES (*Graphognathus* spp.) - ALABAMA - Inspections were made of 110 nurseries and 2,476 other properties in 40 counties with 2,345 acres being found infested, all in vicinity or adjacent to already known infestations. (Owen).

SOYBEAN CYST NEMATODE (*Heterodera glycines*) - ALABAMA - Soil samples were taken from 125 properties comprising 3,084 acres in 6 southwest counties. Visual inspections for plant symptoms were made on 122 properties in same area comprising 3,691 acres. Results were negative. (Owen).

ADDITIONAL NOTES

KANSAS - GRASSHOPPERS threatening to severe in several localized areas in some southwestern counties. Heaviest in heavy volunteer wheat areas in Meade, Haskell and Seward Counties, with up to 30 per square yard. Predominantly Melanoplus bilituratus and about 75 percent adults. Scattering from volunteer fields and moving generally over wheat and grain sorghum fields. Baiting and spraying in progress. Lower, generally 5-10 per square yard, in west central and northwestern counties. (Gates). Non-economic to light in localized areas in Pottawatomie, Shawnee, Wabaunsee, Riley and Geary Counties, with up to 6 per square yard. M. bilituratus and M. femur-rubrum dominant species. The former species generally third and fourth-instar nymphs. (Matthew). CORN EARWORM in grain sorghum heads in most fields examined. Counts in east central counties low, generally non-economic to light. Averaged 1-2 per infested head with about 20 percent plant infestation. (Matthew). Larvae in most grain sorghum fields examined in southwestern counties, however larval counts and plant infestation low. Limited amount of spraying in progress in some areas. (Gates). Infestations requiring control found in localized areas in a few grain sorghum fields in Riley County. Heavier infested fields with 1-8 larvae per infested head. Infestation levels up to 80 percent. Generally, counts much lower. (Burkhardt). SPOTTED ALFALFA APHID found in nearly all alfalfa fields examined in Kansas River Valley in Pottawatomie, Shawnee, Wabaunsee and Riley Counties, with 80-600 per 100 sweeps. About 30 percent winged adults. PEA APHID in Kansas River Valley alfalfa fields ranged to highs of 65 per sweep in Pottawatomie, Shawnee, Wabaunsee, Riley and Geary Counties. (Matthew).

FRUIT INSECTS

ORCHARD MITES - CALIFORNIA - Tetranychus telarius heavy on walnuts in Arlington, Riverside County, and Panonychus ulmi heavy on plum trees in Santa Cruz County. (Cal. Coop. Rpt.). NEW MEXICO - Most adults of Tetranychus spp. have left foliage and moved to bases of trees in Bernalillo, Sandoval, San Juan, Rio Arriba and Taos Counties. Bryobia praetiosa complex eggs numerous on branches in many orchards in Bernalillo, Sandoval and Rio Arriba Counties. (N. M. Coop. Rpt.). COLORADO - T. telarius defoliated trees in Larimer County. (Ext. Serv., Sept. 2). Vasates cornutus silvering leaves, many orchards. (Exp. Sta., Sept. 2).

CODLING MOTH (Carpocapsa pomonella) - NEW MEXICO - Culls due to infested apples running 1-30 percent at packing shed in Albuquerque and Fairview. Poorly treated orchards often 90-100 percent infested. (N. M. Coop. Rpt.). MARYLAND - Late-brood damage to apples at Frederick. (U. Md., Ent. Dept.).

CATFACING INSECTS - NEW MEXICO - Losses due to these insects greater this season than for years on peaches in San Juan, Rio Arriba and Taos Counties. Also damaged pears and apples to a lesser extent. (N. M. Coop. Rpt.).

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - Heavy infestation on peaches in Riverside, Riverside County. (Atkinson, U. C. Exp. Sta.).

GRAPE LEAF FOLDER (Desmia funeralis) - VIRGINIA - Larvae very heavy and have about destroyed leaves of grape vines in Toano, James City County. (Morris, Bryant).

APHIDS - UTAH - Pecans at St. George, Santa Clara, Hurricane area heavily infested with Monellia caryae, M. nigropunctata and M. costalis. Black walnut trees at Mapleton and Provo severely infested by M. nigropunctata this summer, with M. californica and M. caryae involved. Chromaphis juglandicola damaged walnuts at Moab and Logan. (Knowlton). TEXAS - Melanocallis caryefoliae defoliating pecan trees in Gonzales County. (Garner). ARIZONA - Generally heavy on pecan trees to extent that entire leaves are thickly coated with honeydew. (Woodruff).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - NEW MEXICO - Heavy losses in at least one orchard near Albuquerque. Losses estimated at more than one-third of crop. Other orchards in southern Bernalillo County affected to a lesser extent. (N. M. Coop. Rpt.). COLORADO - Infestations on apple averaged one larva per leaf whorl in Delta County. (Exp. Sta., Sept. 2).

EUROPEAN EARWIG (Forficula auricularia) - CALIFORNIA - Spotted infestations in eastern part of Calaveras County. Damaging walnuts on trees by entering the husk from the stem and eating out the husk lining, leaving the husk dry. (Cal. Coop. Rpt.).

MEDITERRANEAN FRUIT FLY (Ceratitis capitata) - ALABAMA - Twenty traps operated in Baldwin and Mobile Counties during the month. Results negative. (Grimes).

TRUCK CROP INSECTS

CABBAGE LOOPER (Trichoplusia ni) - OREGON - Continued serious on cabbage plantings in Washington, Marion and Multnomah Counties. Populations exceeded those noted in past several years. All larval stages present in fields week of September 7. (Every). DELAWARE - Larval feeding common on cole crops throughout State. (MacCreary, Conrad). NEW MEXICO - Larvae moderate on lettuce near Alameda, Bernalillo County. (N. M. Coop. Rpt.). TEXAS - Eggs and young larvae heavy on lettuce in Deaf Smith and Floyd Counties. (Hawkins).

IMPORTED CABBAGEWORM (Pieris rapae) - DELAWARE - Decreased in most cases throughout State. (MacCreary, Conrad). CALIFORNIA - Medium and damaged broccoli in Guadalupe area of Santa Barbara County. (Cal. Coop. Rpt.)

CELERY LEAF TIER (Udea rubigalis) - CALIFORNIA - Medium on lettuce in the Watsonville area of Santa Cruz County. (Cal. Coop. Rpt.).

CABBAGE APHID (Brevicoryne brassicae) - OREGON - Built up on cauliflower and broccoli in Washington, Marion and Multnomah Counties. (Every, Sept. 7). CALIFORNIA - Adults medium in Salinas area of Monterey County. (Cal. Coop. Rpt.).

SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons) - COLORADO - Averaged 150-250 per 100 sweeps on turnips. Incidence of aster yellows 50-75 percent at LaPorte, Larimer County. (Exp. Sta.).

SQUASH BUG (Anasa tristis) - TEXAS - Caused some damage to squash plants in Floyd County. (Hawkins).

EUROPEAN CORN BORER (Pyrausta nubilalis) - DELAWARE - Rather heavy feeding by small larvae in pepper fruits and late potatoes throughout State. (MacCreary, Conrad).

HORNWORMS (Protoparce spp.) - COLORADO - Averaged 1.2 larvae per 100 leaves on tomatoes in Bent, Crowley, Otero and Pueblo Counties. (Exp. Sta.). NEW MEXICO - Defoliated tomato plants in several fields in Albuquerque area, Bernalillo County. (N. M. Coop. Rpt.). TEXAS - Damaged tomato plants in Floyd County and caused light damage to potato plants in Deaf Smith County. (Hawkins).

TOMATO FRUITWORM (Heliothis zea) - COLORADO - Eggs per 100 tomato leaves increased from 0.6 to 0.7, August 30 to September 6, in Bent, Crowley, Otero and Pueblo Counties. (Exp. Sta.). TEXAS - Medium to heavy on tomatoes in Floyd and Deaf Smith Counties. (Hawkins).

SOUTHERN ARMYWORM (Prodenia eridania) - FLORIDA - Larvae caused concern in tomato producing areas near Homestead, Dade County. (Fla. Coop. Sur.).

BLISTER BEETLES - FLORIDA - Averaged 1-15 per plant on 30 acres of eggplant inspected, Alachua County. Det. W. P. Hunter. (Fla. Coop. Sur.).

FLEA BEETLES - VIRGINIA - Numerous on cole crops and peppers on Eastern Shore. (Hofmaster). UTAH - Caused moderate damage to potatoes and rhubarb at Nephi, Juab County. (Knowlton). TEXAS - Epitrix cucumeris caused heavy damage to potato tubers in Deaf Smith County. (Hawkins). NEVADA - Flea beetle reported in CEIR 8(35) : 762 determined as E. hirtipennis by L. G. Gentner. Caused localized, heavy damage to potato foliage in Mason Valley, Lyon County, and tuber damage in Smith and Mason Valleys. (Batchelder, Sept. 5).

GREEN PEACH APHID (Myzus persicae) - CALIFORNIA - Medium on crucifers and potatoes in Salinas area and heavy on potatoes in Streckels area, both in Monterey County. (Cal. Coop. Rpt.).

POTATO APHID (Macrosiphum solanifolii) - COLORADO - Populations of this species and Myzus sp. on potatoes reduced by predation and migrations from maturing plants in Weld, Montrose and Garfield Counties. (Exp. Sta.). UTAH - Generally low to moderate this season. (Knowlton).

POTATO PSYLLID (Paratrioza cockerelli) - UTAH - Moderate on potatoes at Nephi and Springville. Numbers fewer at Fremont. Taken on rabbitbrush at Elsinore and Salina. (Knowlton). COLORADO - Averaged one per 100 sweeps and one per 100 leaves on Weld County potatoes. (Exp. Sta., Sept. 2).

WHITEFLIES - TEXAS - Heavy on Deaf Smith County potatoes. Damage not apparent. (Hawkins).

GREEN CLOVERWORM (*Plathypena scabra*) - DELAWARE - Small larvae common in certain fields of snap and lima beans in Kent and Sussex Counties. (MacCreary, Conrad).

LESSER CORNSTALK BORER (*Elasmopalpus lignosellus*) - CALIFORNIA - Heavy on string beans in San Diego, San Diego County. (Cal. Coop. Rpt.).

MEXICAN BEAN BEETLE (*Epilachna varivestis*) - FLORIDA - Averaged 1-10 per plant in 100 acres of beans inspected, Alachua County. Det. W. P. Hunter. (Fla. Coop. Sur.).

TWO-SPOTTED SPIDER MITE (*Tetranychus telarius*) - CALIFORNIA - Heavy on beans at San Jose, Santa Clara County. (Cal. Coop. Rpt.).

ASPARAGUS BEETLE (*Crioceris asparagi*) - DELAWARE - Larvae heavy on asparagus ferns throughout most of State, adults common. (MacCreary, Conrad).

SPOTTED ASPARAGUS BEETLE (*Crioceris duodecimpunctata*) - DELAWARE - Common to prevalent on asparagus ferns in the State. (MacCreary, Conrad).

SWEETPOTATO WEEVIL (*Cylas formicarius elegantulus*) - ALABAMA - No new infestations found during August, with 21 additional properties released from regulation. (Owen).

STRAWBERRY APHID (*Pentatrichopus fragaefolii*) - OREGON - Appeared low for this time of year in northern Willamette Valley counties. (Every).

A STRAWBERRY LEAF BEETLE (*Paria* sp.) - NORTH CAROLINA - Lightly injured 20 acres of strawberries; 10 acres moderately and $\frac{1}{2}$ acre severely defoliated in Caldwell County. (Scott, Farrier).

COTTON INSECTS

BOLL WEEVIL (*Anthonomus grandis*) - LOUISIANA - Infestation averaged 14 percent in Ouachita Parish and 16 percent in some Tensas Parish fields and 3-20 percent in 7 other fields. Most cotton is about finished. (Spink). TENNESSEE - Migrated to areas not previously infested this season. Square counts of little or no value because of scarcity of squares. Considerable small boll injury in southern counties. (Locke). OKLAHOMA - Square infestation ranged 10-25 percent in Bryan County. (VanCleave, Vick). Infestation in squares and young bolls ranged 50-70 percent in Jefferson and Grady Counties. (Pennington). ALABAMA - Light to medium on irrigated cotton in Limestone County. (Grimes).

BOLLWORMS (*Heliothis* spp. et al.) - LOUISIANA - Infestation averaged 14 percent in Ouachita Parish and one percent in some fields in Tensas Parish. Eggs averaged 5-25 per 100 squares and terminals in Tensas Parish, with very few larvae present. (Spink). TENNESSEE - Moths continued active in most fields, with egg laying in rank fields. All larval stages present. (Locke). OKLAHOMA - Boll damage averaged 2-4 percent in Grady County. (Pennington). ALABAMA - Large numbers of eggs on irrigated cotton in Limestone County, with as many 4-5 on some plants and over 50 percent of plants infested. (Grimes).

PINK BOLLWORM (Pectinophora gossypiella) - OKLAHOMA - One larva found in a lint cleaner in Garvin County. (Pennington). ALABAMA - During August, bloom, boll, lint cleaner and gin trash inspections made at 58 locations in 12 counties representing some 59,358 acres were negative. (Owen).

CABBAGE LOPPER (Trichoplusia ni) - OKLAHOMA - One to two larvae per stalk ragging leaves in Bryan County. (VanCleave, Vick). ARIZONA - Increased in most cotton fields throughout Gila Valley, Graham County. (Woodruff).

COTTON LEAF PERFORATOR (Bucculatrix thurberiella) - ARIZONA - Increased slightly in Graham County. (Woodruff).

APHIDS - TENNESSEE - Increased in rank fields. Control needed in many fields to prevent loss in grade due to honeydew secretions in open cotton. (Locke). ALABAMA - Aphis gossypii caused moderate damage to cotton in northern part of State. (Grimes).

SPIDER MITES - TENNESSEE - Decreased, with more predatory insects being found. Some fields lost middle and top crop due to complete defoliation caused by this pest. (Locke). ALABAMA - Defoliated untreated cotton in northern part of State, with over 100 adults and nymphs per square inch in some areas. (Grimes).

WHITEFLIES - NEVADA - Light in several cotton fields in Pahrump Valley, Nye County, and Moapa Valley, Clark County. (Lauderdale, Sept. 5).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

ORANGE-STRIPED OAKWORM (Anisota senatoria) - CONNECTICUT - An airplane survey disclosed heavy defoliation of woodlands in the Connecticut River Valley and in the southeastern two-thirds of the State. Damage is by far the worst on record. (Cooper). NORTH CAROLINA - Local infestation on oak in Caldwell County. (Scott, Farrier).

GYPSY MOTH (Porthetria dispar) - CONNECTICUT - A survey indicated only one small area of woodlands in towns of Southington and Wolcott defoliated as much as 50 percent. Some 9,000 acres were treated in Bristol, Burlington, Wolcott and Plymouth. Damage was most severe in past several years. (Cooper, Sept. 1).

FALL WEBWORM (Hyphantria cunea) - NEW MEXICO - Defoliating poplars all along the Rio Grande River. Lighter feeding on shade trees in Albuquerque, Espanola, Santa Fe and Taos. (N. M. Coop. Rpt.).

WALNUT CATERPILLAR (Datana integerrima) - OKLAHOMA - About 10 percent damage to pecan trees infested in Grady County. (VanCleave, Pennington).

SPRUCE BUDWORM (Choristoneura fumiferana) - NEW MEXICO - Increase in number of acres partially defoliated in northern area from 80,000 acres in 1957 to 220,000 acres in 1958. (N. M. Coop. Rpt.).

FIR ENGRAVER (Scolytus ventralis) - NEW MEXICO - New outbreak found in Lincoln National Forest. Heavy infestation on 5,000 acres of white fir. Considerable damage to white fir on Sandia Mountains. (N. M. Coop. Rpt.).

BARK BEETLES (Dendroctonus spp.) - NEVADA - Cutting operations on ponderosa pine infested with Dendroctonus monticola, D. brevicornis and D. valens in Crystal Bay area of Lake Tahoe were suspended July 9 because of heavy adult movement. Of the 6,900 originally marked trees, 6,100 were removed at a cost of \$40,000. It is estimated that about 2,000 trees will be removed in 1959. (Zappettini, Sept. 5).

CALIFORNIA - Heavy on pines in El Cajon, San Diego County, light in Fresno. (Cal. Coop. Rpt.). NEW MEXICO - The association of Ips spp. and Dendroctonus spp. has decreased from 1,000,000 acres damaged in 1957 to about 200,000 acres in 1958. D. pseudotsugae decreased from 700,000 damaged acres in 1957 to 500,000 acres in 1958. (N. M. Coop. Rpt.).

LEAF MINERS - WYOMING - Damage by Liriomyza sp. to cottonwood and aspen trees in western area. Zeugophora sp. moderately damaged cottonwood trees in Sweetwater County. (Davison).

APHIDS - OKLAHOMA - Monellia caryae greatly increased in numbers, now averaging 10-15 per leaf in Payne and Grady Counties on pecans. (Bieberdorf, VanCleave). UTAH - Chaitophorus populicola heavily infested poplar in many areas. (Knowlton)

SAWFLIES - MINNESOTA - Neodiprion lecontei feeding on jack pine in Pine City, St. Cloud and Brainerd area. A 40-acre stand treated in St. Cloud area. Diprion similis feeding in Brainerd area but infestation appears less severe than in previous years. The aerial survey for Pristiphora erichsonii defoliation completed. Infestation appears to have expanded. Areas of heavy defoliation have increased and show a movement westward. (Flaskerd).

PEAR LEAF BLISTER MITE (Eriophyes pyri) - NEVADA - The eriophyid mite on ash in Washoe County reported in CEIR 8(35): 768 has been determined by H. H. Keifer as the above species. (Bechtel, Sept. 5).

A HACKBERRY EMPRESS (Asterocampa celtis) - KANSAS - Third generation hatched in east central area. This pest has caused more than the usual amount of injury this year. (Thompson).

WHITE-MARKED TUSsock MOTH (Hemerocampa leucostigma) - DELAWARE - Larvae common on elms in Kent County and sycamores in Sussex County. (MacCreary, Conrad).

ELM CALLIGRAPHA (Calligrapha scalaris) - SOUTH DAKOTA - Infestation of adults on elm in Parkston vicinity of Hutchinson County. (Klix, Hantsbarger).

ELM LEAF BEETLE (Galerucella xanthomelaena) - NEVADA - Pupation of present brood in progress in west central area. (Bechtel et al.). CALIFORNIA - Heavy on elms in Pleasant Hill, Contra Costa County. (Cal. Coop. Rpt.). UTAH - Serious in Salt Lake and Weber Counties. (Knowlton).

BAGWORM (Thyridopteryx ephemeraeformis) - DELAWARE - Very heavy on red cedar in areas of Kent and Sussex Counties. Prevalent on honeylocust in central Kent County. (MacCreary, Conrad). VIRGINIA - Damaging evergreens in Radford, Montgomery County. (Rowell).

A LEAF ROLLER (Platynota stultana) - CALIFORNIA - Heavy on willow and roses in Bakersfield, Kern County. (Cal. Coop. Rpt.).

MIMOSA WEBWORM (Homadaula albizziae) - VIRGINIA - Heavy on mimosa in Blacksburg. (Rowell).

SCALE INSECTS - CALIFORNIA - Aspidiotus camelliae medium infestations on maples in Salinas, Monterey County, and almond trees in Soledad area of Monterey County. Pinnaspis aspidistrae heavy on aspidistra in San Diego. (Cal. Coop. Rpt.). VIRGINIA - Unaspis euonymi heavy on euonymus in Prince William, Surrey and Fauquier Counties. (Rowell, Cox, Smith).

A CHERMID (Chermes sp.) - NEW MEXICO - Heavy infestations on Colorado blue spruce around Raton, Colfax County. Galls very conspicuous. (N. M. Coop. Rpt.).

PRIVET MITE (Brevipalpus obovatus Donnadieu)* - CALIFORNIA - Heavy infestations on a succulent (Ceropegia sp.) and another plant species in Botanical Gardens of University of California, Berkeley. (Cal. Coop. Rpt.).

EUROPEAN EARWIG (Forficula auricularia) - UTAH - Damaging lilac foliage and flowers at Salt Lake. Many still active in various parts of State. Found for first time in Wayne County, at Fremont. (Knowlton).

INSECTS AFFECTING MAN AND ANIMALS

SCREW-WORMS (Callitroga spp.) - NEW MEXICO - Callitroga sp. is a serious problem on recently branded calves in Harding, Union and Colfax Counties. Few infestations in sheep in Guadalupe County. Has been a minor problem on horses in Otero County. (N. M. Coop. Rpt.). ALABAMA - Two cases of C. hominivorax in Elmore County. This is first positive record for year. Sterile screw-worm flies being released. (Grimes, Lauderdale).

MOSQUITOES - IDAHO - Severe and rather general infestation around dwellings in Twin Falls. (Gibson). Culex sp. continues to be a nuisance in Moscow. (Barr). UTAH - Mosquitoes, largely Aedes spp., numerous and annoying in several areas of Cache County. (Knowlton). NORTH CAROLINA - Large numbers of Aedes sollicitans emerged September 2 after heavy coastal rains along entire coast. (Ashton). ALABAMA - Culex quinquefasciatus prevalent in and around homes in Lee County. (Grimes).

SHEEP KED (Melophagus ovinus) - VIRGINIA - On lambs from Augusta County. (Turner, Morgan). UTAH - Numerous on sheep examined in Wayne County. (Hall, Knowlton).

BLOODSUCKING CONENOSE (Triatoma sanguisuga) - TEXAS - Invading homes in Hill County. (Hawkins).

SAND FLIES (Culicoides spp.) - MARYLAND - Annoying humans at Waldorf. (U. Md., Ent. Dept.).

STORED-PRODUCT INSECTS

KHAPRA BEETLE (Trogoderma granarium) - ALABAMA - Four repeat inspections of warehouses in Mobile County were negative. (Owen).

BENEFICIAL INSECTS

PREDATORS - OKLAHOMA - Lady beetles, in alfalfa, averaged 5-15 per 10 sweeps in Grady and Garvin Counties, 10-15 in Bryan County and 6-8 in Murray County. In milo, averaged 1-3 per head in McClain County. (VanCleave, Pennington, Vick). Lacewings averaged 6-10 per 10 sweeps in alfalfa in Grady and Garvin Counties and 4-6 in Bryan County. (VanCleave, Pennington). SOUTH DAKOTA - Orius insidiosus averaged 14 per 20 sweeps on alfalfa in northeast, north central and east central districts. (Klix, Hantsbarger). UTAH - Lady beetles largely eliminated severe aphid attack on black walnut foliage in Provo area. Some Chrysopa sp., minute pirate bugs and syrphid larvae also helped. (Knowlton).

* Pritchard, A. E. and Baker, E. W. 1958. False spider mites (Tenuipalpidae). Univ. Calif. Pub. Ent. 14(3):231.

A BRACONID (Praon palitans) - NEW MEXICO - Appears to be spreading very effectively, being found in 22 of the 32 counties in the State. (N. M. Coop. Rpt.).

A WEEVIL (Apion ulicis) - OREGON - Released at 4 sites in Curry and Lane Counties along coast since 1955 to aid in control of gorse. Increased many fold at 2 original release sites near Bandon, Coos County. (Capizzi).

MISCELLANEOUS INSECTS

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - ALABAMA - An estimated 4,000 acres infested in the vicinity of Camp Rucker, Dale County. (Owen).

A FAN PALM MOTH (Litoprosopus coachella) - CALIFORNIA - Continues as a nuisance damaging household and office materials in Riverside County, also clothes in homes in San Jose, Santa Clara County and Stockton, San Joaquin County. (Cal. Coop. Rpt.).

ASIATIC OAK WEEVIL (Cyrtopistomus castaneus) - DELAWARE - Prevalent in a Kent County alfalfa field and common on corn, soybeans and most vegetable crops throughout State. (MacCreary, Conrad). MARYLAND - Coming to lights and entering houses in Prince Georges, Charles and Montgomery Counties. (U. Md., Ent. Dept.). WEST VIRGINIA - Heavy populations on oak in southern area. Annoying at night gatherings such as ball games. (W. Va. Ins. Sur.). VIRGINIA - Heavy and causing concern in a manufacturing plant in Charlottesville, heavy around homes in Culpeper County, entering houses in Lancaster County and in large numbers on tobacco in Lunenburg County. (Rowell, et al.). Found around dwellings in Westmoreland and Amherst Counties. (Morris, Ptucha, Wilkins).

JAPANESE BEETLE (Popillia japonica) - WEST VIRGINIA - Survey for 1958 showed infestations lighter in panhandle and new infestations in Pocahontas, Monroe, Jackson, Greenbrier and Mason Counties. Found in Nicholas County for first time this year. Populations increased in Summers, Mercer, Clay and Kanawha Counties. (W. Va. Ins. Sur.).

A SUBTERRANEAN TERMITE (Reticulitermes hesperus) - OREGON - In extremely large flights in Marion County week of September 7. (Capizzi).

FALSE CHINCH BUGS (Nysius spp.) - NEVADA - Heavy migrations in west central and northwestern areas of State. (Coop. Rpt., Sept. 5).

WEATHER OF THE WEEK ENDING SEPTEMBER 15 - Continued

But as this cool air spread over the Great Plains it met warm, moisture bearing winds along a line from Texas to the Great Lakes region, resulting in showers and some heavy rainfalls. In advance of this line of showers and over the major portion of the remainder of the Nation, sunny, autumn weather was experienced over the weekend. However, waterspouts and funnel clouds were reported off the northwest coast of Florida and south of Galveston, Texas on the 14th. Earlier in the week waterspouts were sighted near Ft. Lauderdale, Florida. Hail during the week was reported in parts of Idaho, Michigan and Wyoming. (Summary supplied by U. S. Weather Bureau).

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

ASPARAGUS FLY (Platyparea poeciloptera Schrank)

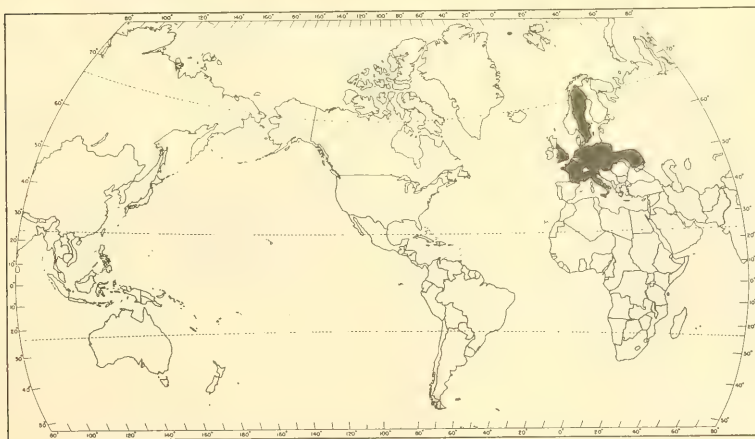
Economic Importance: This tephritid is considered to be one of the three most important pests of asparagus in France. Asparagus fly is generally considered to occur wherever asparagus is grown in Europe, but environmental conditions in certain areas may prevent buildups of populations. Damage is most severe in young asparagus, two-year-old plantings suffering most. The larvae mine the stems, causing distortion or death of early shoots and later attack the plants that are left to develop. Asparagus beds that are left uncontrolled in England become unproductive. Infested older asparagus stems may be recognized in late summer by premature yellowing. This species has been erroneously reported as occurring in the Western Hemisphere.



Stalk Damage

Distribution: Occurs generally throughout the central and southern parts of Europe, having been recorded in Austria, France, England, Netherlands, Germany, Hungary, Poland, Italy, Czechoslovakia, Sweden and USSR (Kiev Oblast).

Hosts: Asparagus is the only known cultivated host.



General Distribution of Asparagus Fly

Life History and Habits: Adult emergence from overwintering puparia begins in April on the European Continent. The eggs are deposited singly, about one inch from the asparagus tip, 0.5 to 1 mm. deep in the scales. Hatching occurs in a few days and the larvae begin to tunnel down the stems feeding on the tissues. One shoot may contain upwards of 20 larvae and pupae. The galleries of the larvae occasionally go to the roots but never penetrate them. Impeded and distorted growth of the stem indicates the presence of the insect. Just before pupation, the larva ascends the stem without making a new gallery to just above the soil level then excavates a passage to the surface without breaking the epidermis. The adult will emerge at this point. Larvae mature in 3 to 4 weeks and then pupate, head upwards, about 2 to 5 inches below the surface of the soil, though sometimes they will pupate above the surface. There is only one generation a year, but due to the lengthy period of emergence, newly-hatched larvae and pupae may be found at the same time, even in the same stem. Asparagus beds that are surrounded by high vegetation are sometimes protected from attack, since the females prefer to lay eggs in clean-cultivated asparagus.

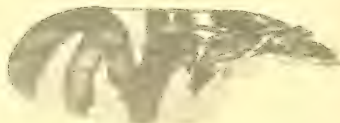
Description: The adult is similar in appearance to the celery fly, *Acidia heraclei*, but is slightly larger, and the black markings on the wings are more extensive. The body is almost entirely gray; head yellow, face ferruginous, palps testaceous, antennae brownish, frons chocolate-brown, eyes red. Thorax clear gray with three long, black longitudinal stripes; shoulders yellowish. Wings are characteristic (see illustration). Abdomen black. Adult 5-7 mm. long. Eggs white and oval, 1.3 mm. long. Mature larva 7-9 mm. long, yellowish-white in color, front segments slightly tapered with two hooks; posterior end flattened with brown plate surrounding two posterior, forked processes. Pupa 7-8 mm. long, slightly flattened on one side, short anchor-like process at posterior end. Color light brown at first, later becoming darker. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies.) CEIR 8(38) 9-19-58



Male



Female



Wing

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Protoparce sexta	quinq.	Heliothis zea	vires.
COLORADO									
Rocky Ford 8/22,25-27								25	
FLORIDA									
Monticello 9/3								3	
Quincy 8/26						1		12	
ILLINOIS									
Urbana 9/5-11	22	6	9	17	9			106	
INDIANA(Counties)									
Orange 9/5-7	3	2	7	4	1	11	11	28	
Tippecanoe 9/4-10	71	9	27	22	7	1	1	368	
KANSAS									
Garden City 9/6-10	56	28						116	
Manhattan 9/1-2	14	7						6	
LOUISIANA									
Baton Rouge 9/5-11	45	51	13	5	206			207	
Shreveport 9/8,11	25	8	10		5		8	160	
MAINE									
Monmouth 9/6-9	8								
MARYLAND									
Fairland 8/29-9/10	14	19		6		4	11	19	
MISSISSIPPI									
*Stoneville 9/5-11	51	32	76	1	97	17	1	879	3
NEBRASKA									
Alliance 8/13-9/3	27	34		129		1	6	9	1
Concord 8/15-9/3	58	32		29				163	
Kearney 8/8-13	10	4		12		17 spp.		52	
Lincoln 8/15-9/3	476	699	106	58				446	
North Platte 8/15-9/4	96	62	9	173	17	8	15	143	9
Scotts Bluff 8/19-9/1	27	15		133			5	3	
NORTH CAROLINA									
Clayton 9/5-11	41	13	24			8	1	53	3
Faison 9/5-11	144	13	57			11	13	29	10
SOUTH CAROLINA									
Charleston 9/8-14	111	44	31		200	91	34	766	9
Clemson 9/6-12	82	16	51	6	37	12	2	30	1
Florence 8/31-9/13	572	81	264		569	131	8	2197	20
TENNESSEE(Counties)									
Blount 9/2-8	40	80	50	4	58	6	3	172	
Cumberland 9/2-8	17	12	5	1	5	13	1	23	
Greene 9/2-8	62	20	76	14	18	23	14	74	
Johnson 9/2-8	470	48	60	8	116	1	1	16	
Madison 9/2-8	13	8	25	1	21	12		169	
Maury 9/2-8	60	28	56		20	14	5	112	
Robertson 9/2-8	60	44	56		12	8	16	460	
TEXAS									
Waco 9/6-12	61		19	9				223	1

*Four traps - Stoneville

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SEPTEMBER 26, 1958

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Cooperative
ECONOMIC INSECT
REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

EUROPEAN CORN BORER found for first time in four Alabama counties and five Louisiana parishes. Percent infestation and larval numbers increased over 1957 in North Dakota. (p. 829).

CORN EARWORM moth flights increased in Wisconsin and infestation in corn fields high in several New Mexico counties. (p. 829).

FALL ARMYWORM damaging in several states. (p. 829).

SOUTHWESTERN CORN BORER found for first time in three Louisiana parishes and damaging corn and sorghum in areas of New Mexico. (p. 830).

MEADOW SPITTLEBUG fall population lower in Ohio than in 1957. (p. 832).

WALNUT HUSK FLY found for first time in Mariposa County, California. (p. 832).

TOMATO FRUITWORM egg counts highest in Colorado for past four years. (p. 834).

A PINE TIP MOTH serious on pine in Texas. (p. 835). ELM LEAF BEETLE heavy and damaging in areas of California. (p. 836).

INSECTS not known to occur in the United States. (p. 841).

WEATHER OF THE WEEK ENDING SEPTEMBER 22

The week's weather, highlighted by torrential downpours and damaging floods in south central areas and continued abnormally high temperatures along the California coast, was about seasonal elsewhere and mostly favorable for agricultural operations. Temperatures for the week averaged below normal in the Pacific Northwest and the midcontinent area with extreme departures as much as -5° in the latter area. Elsewhere weekly averages were slightly above normal, except much above along the California coast where departures ranged up to $+6^{\circ}$ or more. Fluctuations during the week were greatest in the far Southwest, particularly in Arizona where frost and freezing occurred above 7,000 feet in northern areas early in the week, and rising temperatures thereafter reached near record highs in the south on the 21st when Gila Bend recorded 111° and Yuma 109° . Freezing occurred on several mornings in the higher valleys of the northern Rockies, but no serious crop damage was reported.

Rains on most days in west and central Gulf coastal areas were extremely heavy during the weekend when 10 inches or more fell at points in southeastern Texas. Weekly totals ranged up to more than 14 inches in southern and eastern Texas and 10 inches locally in north and central Mississippi. The frequent rains and wet soil halted farm activities, and water covered a considerable acreage of crops but it is too early to assess the probable damage. At Beaumont, Texas, many persons were forced to evacuate their homes, and at Orange, Texas, flood waters rose into many homes and business establishments. In other areas east of lines joining Dodge City, Kansas, with Muskegon, Michigan and Del Rio, Texas, rainfall generally ranged from $1/2$ to 2 inches and was mostly beneficial. More rain is still needed in many sections of the middle and lower Atlantic Coastal States. Rainfall was again light in the northern Great Plains and Far West, except in western Washington where 1 to 2 inches fell and some other widely scattered small areas. Some light snow was reported at higher elevations in Colorado and Wyoming on the 15th and 16th. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - WISCONSIN - Survey showed heaviest adult numbers in central part of State. In Shawano County, 15 percent of those adults examined contained parasitic nematodes. (Wis. Coop. Sur.). NORTH DAKOTA - Injured winter wheat in Bowman County. (N. D. Ins. Rpt.). SOUTH DAKOTA - Second-generation *Melanoplus bilituratus* hatched in southwest area where flights occurred in late June and early July. Hatch considered light, nymphs in first to fourth instars. Elsewhere *M. differentialis* and *M. bivittatus* caused considerable damage to winter wheat and corn, principally in central and southeast areas. (Klix, Hantsbarger). OKLAHOMA - Second-generation *M. bilituratus* heavy in Beaver County, mostly third instar to adult. Damage to sorghum heads and fall-seeded wheat light. (Robinson). Averaged 3-6 per square yard in roadsides in Logan and Kingfisher Counties and 2-3 in Sequoyah, Wagoner, Muskogee, Tulsa, Pawnee and Payne Counties. (Goin). UTAH - Moderately numerous in parts of Promontory area, Box Elder County. Some damage to recently emerged dry farm wheat. (Knowlton). NEW MEXICO - Caused minor damage to grain sorghum heads near Tucumcari, Quay County. Light and damaged alfalfa and small grains in Taos County. (N. M. Coop. Rpt.). CALIFORNIA - Adult survey showed an estimated 4,523,000 acres infested by all economic species. (Cal. Coop. Rpt.).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - DELAWARE - Egg laying ceased, few adults still present. (MacCreary, Conrad). ALABAMA - Found for first time in Pickens, Green, Perry and Hale Counties. (Grimes). LOUISIANA - New parish records for 1958 are Ouachita, Bossier, Caddo, Red River and Natchitoches Parishes. (Spink). WISCONSIN - Second-brood larvae chiefly in fourth instar, with third and fifth instars observed in about equal numbers in southern part of State. (Wis. Coop. Sur.). OHIO - Abundant in ears of late sweet corn at Toledo. Mostly fifth-instar larvae. Number surprising in view of light first-brood population. (Triplehorn). NORTH DAKOTA - Survey in Cass County showed 76 percent infestation, with average of 258 larvae per 100 plants, which is an increase in percent of plants infested and number of larvae per plant over 1957. (N. D. Ins. Rpt.). SOUTH DAKOTA - Infestation averaged 61 percent with 115 first to fifth-instar larvae per 100 corn plants in southeast district and 58 percent in east central district with 135 first to fifth-instar larvae per 100 plants. (Klix, Hantsbarger).

CORN EARWORM (*Heliothis zea*) - MARYLAND - Caused light injury to soybean pods at Hurlock, Dorchester County. (U. Md., Ent. Dept.). DELAWARE - Averaged 1 per 10 sweeps on alfalfa and 1 per 20 sweeps in soybeans. Heavy flights noted September 16 in Kent County. (MacCreary, Conrad). VIRGINIA - Light to medium on peanuts and sorghums in Holland area of Nansemond and Southampton Counties. (Boush). ALABAMA - Heavy in late field corn in northern part of the State, and large numbers in grain sorghum in same area. (Grimes). WISCONSIN - Moth flights increased during week of September 12 as indicated by catches of some light traps. Damage to sweet corn ears in Columbia County by this pest exceeded that of European corn borer and fall armyworm combined. (Wis. Coop. Sur.). OHIO - Moderately heavy on late sweet corn at Toledo, with 47 percent infestation in untreated check plots. Mostly first and second-instar larvae. Little damage. (Triplehorn). OKLAHOMA - In sorghum, averaged 2-5 per head in Wagoner County and up to 10 per head in Pushmataha County. Averaged 1-3 per 10 sweeps in alfalfa in Sequoyah and Tulsa Counties. (Goin). TEXAS - Light in Brazos County grain sorghum. (Randolph). UTAH - Very numerous in field corn examined in northern and central areas of State. (Knowlton). NEW MEXICO - Almost 100 percent of ears infested in most corn fields in Quay, De Baca, Curry and Roosevelt Counties. (N. M. Coop. Rpt.).

FALL ARMYWORM (*Laphygma frugiperda*) - DELAWARE - Few feeding on Kent County soybeans and prevalent in ears of late field corn in New Castle County. Some

larvae present in more succulent field corn ears throughout State. (MacCreary, Conrad). VIRGINIA - Caused heavy damage to sorghum in some fields in Eastern Shore counties. (Hofmaster). ALABAMA - Heavy in late field corn and large numbers in grain sorghum in northern areas of State. (Grimes). TEXAS - Damaged late grain sorghum in pre-boot stage in Brazos County. (Randolph). CALIFORNIA - Heavy on corn in Escondido, San Diego County. (Cal. Coop. Rpt.).

SOUTHERN CORNSTALK BORER (Diatraea crambidoides) - ALABAMA - Limited numbers in corn in northern part of State. (Grimes).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - LOUISIANA - New parish records for 1958 are Union, Red River and Natchitoches Parishes. (Spink). NEW MEXICO - Infestation averaged 80-100 percent in most corn fields in Quay, Curry, Roosevelt and De Baca Counties, many with 2-3 larvae feeding within a silk. Damaged grain sorghum planted near corn. (N. M. Coop. Rpt.).

SORGHUM WEBWORM (Celama sorghiella) - VIRGINIA - Heavy, 5-20 per head, on sorghum in Holland area of Nansemond and Southampton Counties, particularly on loose headed varieties. (Boush). ALABAMA - Increased in grain sorghum in central and northwest areas of State. (Grimes). OKLAHOMA - Ranged from 1-2 per head in Muskogee and Tulsa Counties to 10-50 per head in Wagoner County. (Goin). TEXAS - Ranged 5-50 per head in grain sorghum in Brazos County. (Randolph).

FLEA BEETLES - OKLAHOMA - Chaetocnema spp. averaged 5-10 per foot in Payne County barley. (Wood). SOUTH DAKOTA - Phyllotreta striolata in alfalfa averaged 4 per 20 sweeps in southeast district and 3 in east central district. (Klix, Hantsbarger). TEXAS - Damaged young wheat as it "came up" in Floyd County. (Lewis).

NORTHERN CORN ROOTWORM (Diabrotica longicornis) - SOUTH DAKOTA - Adults averaged 3-12 per 20 sweeps in southeast and east central district alfalfa fields. (Klix, Hantsbarger).

CORN LEAF APHID (Rhopalosiphum maidis) - WYOMING - Infested shucks and leaves of maturing corn in Platte County. Populations very high in some fields, low in others. Damage minor. (Davison). OKLAHOMA - Large numbers on grain sorghum in Pushmataha County. (Goin). TEXAS - Heavy in Brazos County grain sorghum. (Randolph).

A GRASS MITE (Oligonychus stickneyi) - CALIFORNIA - Heavy on corn in Escondido, San Diego County. (Cal. Coop. Rpt.).

SORGHUM MIDGE (Contarinia sorghicola) - OKLAHOMA - Averaged from 20-50 percent of grain sorghum destroyed in some Payne, Tulsa and Wagoner County fields to nearly 100 percent damage in some Muskogee County fields. (Wood).

CHINCH BUG (Blissus leucopterus) - OKLAHOMA - Averaged 100-200 per stalk on grain sorghum in central and east central areas. (Wood).

FALSE CHINCH BUGS (Nysius spp.) - NEW MEXICO - Greatly reduced with ripening of grain sorghum in Quay, Curry, Roosevelt and Lea Counties. Occasional damage to late plantings. (N. M. Coop. Rpt.).

LEAF-FOOTED BUG (Leptoglossus phyllopus) - ALABAMA - Damaged grain sorghum in northwest part of State. Infestations severe in several fields. (Grimes).

BEET WEBWORM (Loxostege sticticalis) - NEW MEXICO - Damaged young wheat fields near Fort Sumner, De Baca County, and House, Quay County. Caused some damage to alfalfa fields surrounded by rangeland. (N. M. Coop. Rpt.).

HESSIAN FLY (*Phytophaga destructor*) - NEBRASKA - All stages in fields of older volunteer wheat in most parts of Lancaster County. Quite likely that a partial second fall brood will occur. (Roselle).

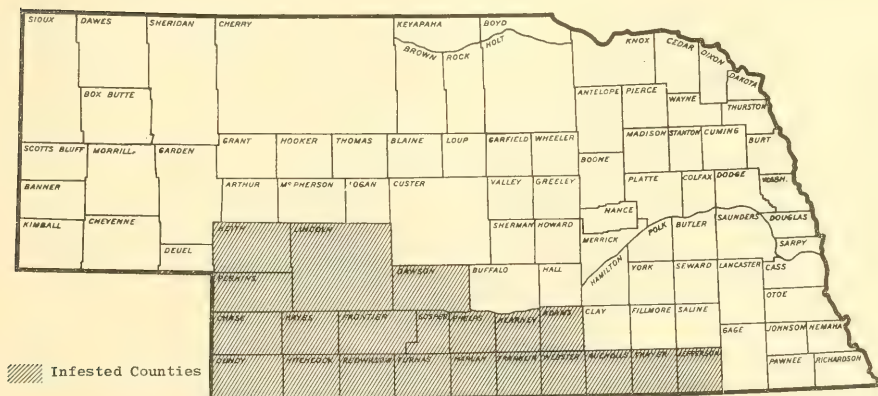
ALFALFA CATERPILLAR (*Colias philodice eurytheme*) - CALIFORNIA - Heavy in Yolo County alfalfa fields. (Cal. Coop. Rpt.). OKLAHOMA - Averaged 1-6 per 10 sweeps in alfalfa in Payne, Creek, Tulsa, Wagoner, Muskogee and Sequoyah Counties. (Wood). NEBRASKA - Larvae light to moderate in alfalfa fields in southeast portion of State, with 12-25 per 100 sweeps. Adults very abundant in most fields. (Andersen). NORTH DAKOTA - Larvae present in most alfalfa fields, but numbers low. (N. D. Ins. Rpt.). NEW MEXICO - Averaged 2-3 per 10 sweeps in alfalfa near Bethel and Portales, Roosevelt County, and near Lovington, Lea County. Light in Chaves, De Baca, Otero and Quay Counties. Recent rain appears to have reduced threat near Hagerman and Dexter, Chaves County. (N. M. Coop. Rpt.).

BEET ARMYWORM (*Laphygma exigua*) - TEXAS - Averaged 5 per 5 sweeps on alfalfa in Brazos County. (Randolph). NEW MEXICO - Moved into young wheat fields in Weber City area, Curry County. (N. M. Coop. Rpt.).

CELERY LEAF TIER (*Udea rubigalis*) - CALIFORNIA - Medium in alfalfa fields and on lawns in College City area, Colusa County. (Cal. Coop. Rpt.).

GREEN CLOVERWORM (*Plathypena scabra*) - OKLAHOMA - Averaged from 1-2 per 10 sweeps in alfalfa in Muskogee County to 10-15 in Tulsa County. (Wood). DELAWARE - Small larvae increased on soybeans and alfalfa throughout State. (MacCreary, Conrad). VIRGINIA - Very light on soybeans in Holland area, southeastern portion of State. (Boush). NORTH DAKOTA - Larvae present in most alfalfa fields, but numbers low. (N. D. Ins. Rpt.).

Spotted Alfalfa Aphid Infestation in Nebraska as of September 20



SPOTTED ALFALFA APHID (*Therioaphis maculata*) - OKLAHOMA - Averaged less than 25 per 10 sweeps in Muskogee, Wagoner and Creek Counties to 150-250 per 10 sweeps in Payne and Sequoyah Counties in alfalfa. (Wood). NEBRASKA - Averaged 0-10 per 100 sweeps in Keith and western Dawson Counties, in Platte Valley. Averaged 3-8 per 100 sweeps in Jefferson County. High, 200 per sweep, in Republican Valley counties. (Hill, Andersen). NEW MEXICO - Appeared to be building up in alfalfa in Roosevelt and Lea Counties. (N. M. Coop. Rpt.).

PEA APHID (Macrosiphum pisi) - WYOMING - Averaged 125 per 10 sweeps in alfalfa. (Davison). NEBRASKA - Light in alfalfa in all southeastern counties, with 60-180 per 100 sweeps. (Andersen). DELAWARE - Heavy in most alfalfa fields. (MacCreary, Conrad). UTAH - Damaged alfalfa in parts of Iron, Millard and Uintah Counties. (Knowlton).

BEAN LEAF BEETLE (Cerotoma trifurcata) - DELAWARE - Common on soybeans throughout State. (MacCreary, Conrad).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - DELAWARE - Common on soybeans throughout State. (MacCreary, Conrad).

LYGUS BUGS (Lygus spp.) - DELAWARE - L. lineolaris adults and nymphs fairly heavy in Sussex County alfalfa. (MacCreary, Conrad). NORTH DAKOTA - L. lineolaris ranged from trace to 1.5 adults per sweep in eastern portion of State. (N. D. Ins. Rpt.). SOUTH DAKOTA - Nymphs and adults averaged 71 per 20 sweeps on alfalfa in southeast district and 67 in east central district. (Klix, Hantsbarger). NEBRASKA - L. lineolaris averaged 30-80 per 100 sweeps in southeastern alfalfa fields. (Andersen). IDAHO - Nymphs ranged up to 120 per sweep in third-cutting alfalfa hay in Canyon County. (Waters).

MEADOW SPITTLEBUG (Philaenus leucophthalmus) - OHIO - Fall populations lower than in 1957. A survey showed adults per sweep averaged 1.89 in Wayne, 1.37 in Mahoning, 1.75 in Lorain, 0.80 in Ottawa, 1.5 in Wood, 2.52 in Franklin, 2.96 in Ross and 2.82 in Greene Counties. (Treece).

PLANT BUGS - DELAWARE - Adelphocoris rapidus adults and nymphs fairly heavy in Sussex County alfalfa. (MacCreary, Conrad). NORTH DAKOTA - A. lineolatus ranged from trace to .5 bug per sweep in eastern alfalfa. (N. D. Ins. Rpt.).

GARDEN FLEAHOPPER (Halticus bracteatus) - DELAWARE - Prevalent in some Sussex County soybean fields. (MacCreary, Conrad).

POTATO LEAFHOPPER (Empoasca fabae) - DELAWARE - Common on soybeans throughout State. No increase in alfalfa. (MacCreary, Conrad). VIRGINIA - Light or about disappeared from peanuts in Holland area in southeastern portion of State. (Boush).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - OKLAHOMA - Averaged 5-15 per 10 sweeps in central and east central alfalfa. (Wood). TEXAS - Averaged 20-25 per 5 sweeps in alfalfa in Brazos County. (Randolph).

A CHAFER - (Cyclocephala pasadenae) - CALIFORNIA - Heavy in lawns in Lodi, San Joaquin County, and in Auburn, Placer County. (Cal. Coop. Rpt.).

A SOD WEBWORM (Crambus sp.) - COLORADO - Adults and larvae caused severe damage to lawns in Grand Junction and Palisades, Mesa County. (State Dept. Agr., Exp. Sta.).

A SPRINGTAIL (Achorutes armatus) - CALIFORNIA - Heavy on lawns and sidewalks at Napa, Napa County. (Cal. Coop. Rpt.).

FRUIT INSECTS

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - Occurred in traps in Empire, Ripon and Escalon areas of San Joaquin County and as a first record for Mariposa County in the Cathay and Hornitos areas. (Cal. Coop. Rpt.).

POLYPHEMUS MOTH (Antheraea polyphemus) - IDAHO - Mature larvae defoliating filbert trees in Boise area. (Hilfiker).

WALNUT CATERPILLAR (Datana integerrima) - OKLAHOMA - Damaging pecan trees in Payne County. (Howell).

FALL WEBWORM (Hyphantria cunea) - CALIFORNIA - Heavy infestations on walnuts in Clarksburg area of Yolo County. (Cal. Coop. Rpt.).

CODLING MOTH (Carpocapsa pomonella) - CALIFORNIA - Light infestations in walnut husks in San Martin, Santa Clara County. (Cal. Coop. Rpt.). UTAH - Moth count high in Uintah County apples, quite generally. (Knowlton).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - MISSISSIPPI - Damaging untreated home orchards of apples throughout apple-growing areas of State. (Hutchins).

A CATERPILLAR - IDAHO - A caterpillar (probably Schizura ipomoeae) feeding on prunes in Emmett area where many young trees show heavy defoliation. (Scott).

BEE T ARMYWORM (Laphygma exigua) - CALIFORNIA - Heavy populations attacking apricot trees in San Jose, Santa Clara County. (Cal. Coop. Rpt.).

PLUM CURCULIO (Conotrachelus nenuphar) - MISSISSIPPI - Some damage to apples in Monroe County. (Hutchins).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - OHIO - Heavy infestations of second-brood larvae in Lima area. (Cutright).

MITES - NEW MEXICO - Very few adults of Tetranychus sp. feeding on foliage in De Baca County. Most areas report they are in webbing at base of apple trees. Eggs of Bryobia praetiosa complex very numerous in orchards in 6 counties. (N. M. Coop. Rpt.). CALIFORNIA - Vasates fockeui damaging cherry trees in San Jose, Santa Clara County. (Cal. Coop. Rpt.). OREGON - Vasates cornutus abundant on peach foliage in Medford area and causing silvering of leaves. (Gentner).

BOXELDER BUG (Leptocoris trivittatus) - UTAH - Damage to ripe fruits above normal in northern and central areas this fall. (Davis, Knowlton).

TRUCK CROP INSECTS

CABBAGE APHID (Brevicoryne brassicae) - OREGON - Building up slowly in Gresham area, Multnomah County, but is below normal for this time of year. (Every). UTAH - Caused moderate damage to cabbage in Uintah and Duchesne Counties. (Knowlton).

CABBAGE LOOPER (Trichoplusia ni) - VIRGINIA - Light on broccoli in 4 fields surveyed in Northampton County. (Hofmaster, Morris). TEXAS - Caused some damage to tomato plants in Brazos County (Alex) and heavy damage to cabbage and cauliflower in Winter Garden area, Dimmit County, averaging 18 young larvae per plant (Plowman). Averaged 10 larvae per cabbage plant in Bexar County. (Hawkins). NEW MEXICO - Damaged lettuce in Dona Ana and Eddy Counties. (N. M. Coop. Rpt.).

IMPORTED CABBAGEWORM (Pieris rapae) - OREGON - Large numbers of adults in Medford area, feeding on nectar of flowers of many kinds. Ovipositing on cruciferous crops, especially young mustard in fields and orchards. Foliage badly damaged, larvae nearly mature. (Gentner).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - FLORIDA - Averaged 1-30 per plant on 15 acres of eggplant inspected at Hague, Alachua County. (Fla. Coop. Sur.).

EGGPLANT LEAF MINER (Keiferia glochinella) - FLORIDA - Averaged 1-2 pupae per plant on 35 acres of eggplant inspected at Hague, Alachua County. (Fla. Coop. Sur.).

TOMATO PINWORM (Keiferia lycopersicella) - TEXAS - Caused some damage to tomato plants in Brazos County. (Alex).

TOMATO FRUITWORM (Heliothis zea) - OKLAHOMA - Damaged approximately 10 percent of pods in some Adair County fields of snap beans. (Frazier). DELAWARE - Adults common in fields of peppers and beans in Kent and Sussex Counties. Larvae common on lima and snap beans throughout State. (MacCreary, Conrad). NEW MEXICO - Generally light in lettuce fields in Chaves, Eddy and Dona Ana Counties. (N. M. Coop. Rpt.). COLORADO - Egg counts on tomatoes per 100 leaves increased to 1.5, September 13, in Bent, Crowley, Otero and Pueblo Counties. This is largest count average for past 4 years for second week in September. (Exp. Sta.)

BEAN LEAF BEETLE (Cerotoma trifurcata) - OKLAHOMA - Damaged 5-10 percent of crop in some snap bean fields, Adair County. (Frazier). DELAWARE - Common on snap beans in Sussex County. (MacCreary, Conrad). VIRGINIA - Light on snap beans in 3 fields surveyed in Northampton County. (Hofmaster, Morris).

BEET ARMYWORM (Laphygma exigua) - NEW MEXICO - Heavy infestations damaged peas and beans near Weber City, Curry County. (N. M. Coop. Rpt.). OREGON - Caused considerable damage to young sugarbeet plantings for seed in Medford area. Large numbers of larvae feeding on various weeds, many completely defoliated. (Gentner).

GREEN CLOVERWORM (Plathypena scabra) - DELAWARE - Small larvae common on beans throughout State. (MacCreary, Conrad).

MEXICAN BEAN BEETLE (Epilachna varivestis) - VIRGINIA - Adults and larvae light in 3 fields of snap beans surveyed, Northampton County. (Hofmaster, Morris).

PLANT BUGS - DELAWARE - Adults and nymphs of Adelphocoris rapidus and Lygus lineolaris common on lima beans throughout State. (MacCreary, Conrad).

CUCUMBER BEETLES (Diabrotica spp.) - DELAWARE - D. undecimpunctata howardi common on beans and asparagus throughout State. (MacCreary, Conrad). VIRGINIA - D. undecimpunctata howardi light on snap beans in 3 fields surveyed in Northampton County. (Hofmaster, Morris). CALIFORNIA - Diabrotica sp. medium and damaged potato tubers in Murrietta district of Riverside County. (Cal. Coop. Rpt.).

ASPARAGUS BEETLE (Crioceris asparagi) - DELAWARE - Larvae heavy on most asparagus plantings throughout State, yellowing about 50 percent of ferns in one Sussex County planting. (MacCreary, Conrad).

BEET LEAFHOPPER (Circulifer tenellus) - UTAH - Sugar beet tonnage outlook greatly reduced in Bothwell area, Box Elder County. (Knowlton).

BEET WEBWORM (Loxostege sticticalis) - COLORADO - Third brood reported in Larimer and Weld County areas. Fields being treated. (Sugar Beet Industry).

EUROPEAN CORN BORER (Pyrausta nubilalis) - MARYLAND - Generally light in pepper fruits in Worcester County. (U. Md., Ent. Dept.). DELAWARE - Larvae caused considerable damage to most pepper plantings in Kent and Sussex Counties. (MacCreary, Conrad).

GREEN PEACH APHID (*Myzus persicae*) - MARYLAND - Heavy on peppers at Waleysville, Worcester County. (U. Md., Ent. Dept.). CALIFORNIA - Heavy in pepper plantings in San Onofre Canyon area, San Diego County. (Cal. Coop. Rpt.).

A CUTWORM (*Diarsia rosaria*) - CALIFORNIA - Heavy on strawberries in Watsonville area, Santa Cruz County. (Cal. Coop. Rpt.).

A PHYCITID MOTH (*Ephestiodes gilvescentella*) - CALIFORNIA - Originally reported as medium to heavy on strawberry in Watsonville area of Santa Cruz County, week of May 23. In Salinas area of Monterey County, infested strawberry fruits were caged and moths reared, emerging in late August. This is the first record of larvae of this moth attacking strawberry. (Cal. Coop. Rpt.).

STRAWBERRY APHID (*Pentatrichopus fragaefolii*) - OREGON - Populations unusually low for this time of year in Willamette Valley. (Every).

COTTON INSECTS

BOLL WEEVIL (*Anthonomus grandis*) - OKLAHOMA - Infestation of squares and young bolls 50-75 percent in some late cotton fields in Sequoyah and Wagoner Counties. (Frazier).

PINK BOLLWORM (*Pectinophora gossypiella*) - OKLAHOMA - Gin trash and lint cleaner inspections indicate infestations are somewhat higher in southwestern counties than during same period in 1957. (Frazier).

SALT-MARSH CATERPILLAR (*Estigmene acrea*) - CALIFORNIA - Built up rapidly, newly emerged moths noted in almost all fields examined. Egg laying heavy, hatching widespread, especially in northern end of Imperial Valley. Populations heaviest in fields which have had repeated controls. (Peterson).

COTTON APHID (*Aphis gossypii*) - OKLAHOMA - Averaged 10 per leaf in some Sequoyah County cotton fields. (Frazier).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

ORANGE-STRIPED OAKWORM (*Anisota senatoria*) - MARYLAND - Defoliating small oaks at Fairland, Montgomery County. (U. Md., Ent. Dept.). RHODE ISLAND - Pupation underway. Heavy local defoliation throughout State. (Hansen).

A PINE TIP MOTH - TEXAS - Serious infestation of pine on western edge of pine belt in Wood, Gregg, Smith and Anderson Counties. Some pines 80 feet tall have heavy infestations. (Young).

NANTUCKET PINE MOTH (*Rhyacionia frustrana*) - OKLAHOMA - Infestations vary from 0-99 percent depending on species of pine. (Bieberdorf). VIRGINIA - Damaged pines in Hampton. (Rowell, Adams).

WHITE-MARKED TUSsock MOTH (*Homocampa leucostigma*) - DELAWARE - Larvae fairly common on a wide variety of forest and ornamental trees throughout State. (MacCreary, Conrad)

IPS BEETLES (*Ips* spp.) - TEXAS - Mortality of some merchantable pines in Polk and Tyler Counties. (Young).

SAWFLIES - DELAWARE - Nematus ventralis feeding heavily on willows in an area of Sussex County and Caliroa lineata feeding heavily on oaks in eastern New Castle County. (MacCreary, Conrad).

ELM LEAF BEETLE (Galerucella xanthomelaena) - CALIFORNIA - Heavy and damaging elms in Lemoore area of Kings County, and Alturas in Modoc County. Light in Castaic area of Los Angeles County. (Cal. Coop. Rpt.).

MIMOSA WEBWORM (Homadula albizziae) - MARYLAND - Heavy on mimosa in southern counties. (U. Md., Ent. Dept.). VIRGINIA - Damaging mimosa trees in Isle of Wight County. (Amos, Gill) and in Salem (Morris).

POPLAR TENT MAKER (Ichthyura inclusa) - DELAWARE - Larvae fairly common on willows in an area of Sussex County. (MacCreary, Conrad).

A TWIG BORER (Proteoteras aesculana) - CALIFORNIA - Heavy and damaging silver maple in Redwood City, San Mateo County and in Oakland, Alameda County. (Cal. Coop. Rpt.).

WEBWORMS - DELAWARE - Salebria afflictella and Tetralopha melanogrammos causing conspicuous damage to yellow gum trees in Sussex County. (MacCreary, Conrad).

EUROPEAN EARWIG (Forficula auricularia) - MARYLAND - One adult taken from a lilac bush at Silver Spring, Montgomery County, September 10, new record for State. Apparently brought in by homeowner on plants or soil from infested area outside of State. Det. A. B. Gurney. (U. Md., Ent. Dept.). IDAHO - Adults beginning to congregate and hibernate in protected places in Moscow area. (Manis).

MITES - CALIFORNIA - Oligonychus ununguis medium on spruce in Alturas, Modoc County. (Cal. Coop. Rpt.). OKLAHOMA - Heavy populations of Tetranychus sp. on privet, asters, zinnias and other plants in Payne County. (Howell).

SCALE INSECTS - MARYLAND - Pseudaulacaspis pentagona heavy on privet at Silver Spring, Montgomery County. (U. Md., Ent. Dept.). CALIFORNIA - Orthezia insignis heavy on ice plants in Santa Barbara. (Cal. Coop. Rpt.). OKLAHOMA - Aspidiotus perniciosus severely damaging pyracantha in Frederick. (Hatfield). Kermes bougei heavy on some oaks in Oklahoma City. (Thomas). UTAH - Severely damaging ornamental junipers at Brigham. (Knowlton).

AZALEA LACE BUG (Stephanitis pyrioides) - MARYLAND - Heavy on azalea at various localities in Montgomery and Anne Arundel Counties. (U. Md., Ent. Dept.).

AZALEA CATERPILLAR (Datana major) - MISSISSIPPI - Damaging azaleas in noticeable numbers in Poplarville. (Hutchins). NORTH CAROLINA - Attacking azaleas in Wake County. (Jones, Farrier). VIRGINIA - Larvae, probably this species, feeding on azaleas in localities of Newport News and in Prince George County. (Amos, Stump, Harris).

ASIATIC OAK WEEVIL (Cyrtopistomus castaneus) - MARYLAND - Damaging crapemyrtle at Leonardtown, St. Marys County. Coming to lights in most sections. (U. Md., Ent. Dept.). VIRGINIA - A nuisance in and around homes in Fauquier County (Amos, Sutphin) and Lancaster, Hanover, Campbell, Loudoun and Mecklenburg Counties and in Charlottesville (Rowell et al.).

A COSMOPTERYROID MOTH (Stagmatophora ceanothiella) - CALIFORNIA - Heavy on ceanothus in San Jose, Santa Clara County. (Cal. Coop. Rpt.).

INSECTS AFFECTING MAN AND ANIMALS

SCREW-WORM (Callitroga hominivorax) - LOUISIANA - One cow infested in a herd of 43 in Tensas Parish. First authenticated report of this species in the State this year. (Spink). ALABAMA - Several additional infestations found since previous week in Elmore County. One or two infested animals found in Montgomery County. Federal eradication measures underway. (Lauderdale).**

MOSQUITOES - CALIFORNIA - Light-trap records for week of September 7-13 indicated that in the Sacramento Valley Culex tarsalis was taken in larger numbers than any other species of mosquitoes except in Butte County where Anopheles freeborni was predominant. In the San Joaquin Valley Aedes nigromaculis was more numerous followed by C. tarsalis. C. tarsalis also found in central coastal area and Coachella Valley. (Peters). OREGON - Breeding in log ponds and creating quite a problem in Curry County. (Capizzi).

HORN FLY (Siphona irritans) - OKLAHOMA - Populations down in Payne County, averaged 75-100 per dairy animal. (Howell). Averaged 50-100 per dairy animal in Tulsa and Pawnee Counties, and 300-600 per mature range cow in Noble County. (Coppock). ALABAMA - Heavy on cattle in Elmore County. (Grimes). UTAH - Still troublesome throughout the Uintah Basin. (Knowlton).

STABLE FLY (Stomoxys calcitrans) - OKLAHOMA - Averaged 50-70 per untreated dairy animal in Payne County. (Howell).

HOUSE FLY (Musca domestica) - IDAHO - Adults have been more abundant in homes in Moscow area during late summer than at any time during past 12 years. (Barr, Manis).

BLACK FLIES - UTAH - Annoying in Weber Canyon and to horses near Ogden. (Fronk, Knowlton).

EAR TICK (Otobius megnini) - OKLAHOMA - Exceeding 50 per head in Caddo County. (Walton).

LESSER MEALWORM (Alphitobius diaperinus) - PENNSYLVANIA - Adults very abundant in chicken manure in Franklin County, week ending September 13. (Pepper).

CAT FLEA (Ctenocephalides felis) - CALIFORNIA - Flea inquiries rather numerous this season compared with previous years. Investigations made in number of instances on September 17 and 18, showed fleas to be of this species. (Peters).

STORED-PRODUCT INSECTS

MEAL MOTH (Pyralis farinalis) - IDAHO - Adults quite common in a number of homes in Moscow area. A heavy infestation in farm stored feed grain reported from Donnelly area. (Barr, Manis).

A FOREIGN GRAIN BEETLE (Ahasverus advena) - COLORADO - Extremely numerous in farm stored corn, Harmony, Larimer County. (CCC, Exp. Sta.).

RED FLOUR BEETLE (Tribolium castaneum) - OREGON - This species in combination with Stegobium paniceum apparently more abundant than usual in western area judging from inquiries received. (Every).

**SCREW-WORM (Callitroga hominivorax) - MISSISSIPPI - An infestation found in Amite County, September 17. (Hutchins).

BENEFICIAL INSECTS

PREDATORS - OKLAHOMA - In alfalfa, Hippodamia convergens averaged 5-10 per 10 sweeps in Payne, Tulsa, Muskogee and Sequoyah Counties, Nabis sp. 2-8 in Payne, Creek, Muskogee and Sequoyah Counties and lacewings 2-6 in Payne, Muskogee and Sequoyah Counties. (Coppock).

A PRAYING MANTID - CALIFORNIA - Large numbers in shrubbery surrounding local motels in Bakersfield, Kern County. (Cal. Coop. Rpt.).

A KLAMATHWEED BEETLE (Chrysolina gemellata) - IDAHO - Adults emerged from summer aestivation in Rathdrum Prairie area. (Barr).

MISCELLANEOUS INSECTS

VINEGAR FLIES - VIRGINIA - Serious around canneries and homes on Eastern Shore and are a general public nuisance. (Hofmaster).

COCKROACHES - NORTH CAROLINA - Heavy and difficult to control in a prison camp in Hertford County. (Scott).

ELM LEAF BEETLE (Galerucella xanthomelaena) - OKLAHOMA - Invading homes in eastern and central areas. (Howell).

A TERMITE (Zootermopsis angusticollis) - NEW YORK - On August 7, a carload of Douglas fir two by fours, shipped from the Pacific Coast to a lumber yard in the central Hudson Valley, was found to be infested. The infested lot, consisting of 350 pieces, was burned and the ground of the storage area treated. In addition, 5700 pieces, were traced to their destinations and with the exception of a few already in use, all were inspected with negative results. Det. H. Miller and confirmed T. E. Snyder. (Collins).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Protoparce sexta	Helio. quinq. zea
ALABAMA							
Auburn 9/10-11	72	36			26	11	65
Crossville 9/9,12	40	6			10	29	38
ARKANSAS							
Fayetteville 9/4-17	52	29		2	73		523
Kelso 9/4-17	17	19			54		491
FLORIDA							
Homestead 9/12	1						
Quincy 9/9	31						56
IDAHO							
Parma 9/14	1						
ILLINOIS							
Urbana 9/12-18	27	4	10	23			142

LIGHT TRAP COLLECTIONS - Continued

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Protoparce sexta	quinq.	Heliothis zea	vires
INDIANA(Counties)									
Orange 9/8-14	15	4	6	3		11	7	23	
Tippecanoe 9/11-18	47	3	33	29	10	1		93	
LOUISIANA									
Baton Rouge 9/12-18	113	68	27		417		3	73	
Franklin 9/18	3	1	10		22				
Shreveport 9/15	3	8	3		3		2	13	
MARYLAND									
Fairland 9/11-18	4			4			5	7	
MISSISSIPPI									
Grenada 9/1-5,8-13	17	17	2					11	
Senatobia 8/28-9/11		2			1			11	
*State College 9/6-19	134	87	115		147	9		936	29
*Stoneville 9/12-18	114	32	78	2	115	33	4	429	6
NEBRASKA									
Alliance 9/4-9	45			7				93	3
Concord 9/5-12	31	6	2	16		2	1	457	
Kearney 9/4-10	4	13		7		5	1	16	
North Platte 9/5-11	95	19	8	25	5	2		256	8
Scotts Bluff 9/2-8	87	6		38				30	
NORTH CAROLINA									
Clayton 9/12-17	51	20	53			8	3	103	4
Faison 9/12-17	64	23	55				4	55	7
SOUTH CAROLINA									
Clemson 9/13-19	52	8	59	2	40	8		34	
Florence 9/14-20	282	16	128		192	26	17	1004	52
TENNESSEE(Counties)									
Blount 9/9-15	80	84	124	4		8	20	148	
Cumberland 9/9-15	62	36	36	8			44	116	
Johnson 9/9-15	330	159	174	15	48		3	81	
Madison 9/9-15	11	2	13	1			18	202	
Mauzy 9/9-15	40	12	64		16	8	56	160	
Robertson 9/9-15	44	8	8		32		32	140	
TEXAS									
Waco 9/13-19	208		80	34				473	3

*Two traps - State College; 4 traps - Stoneville

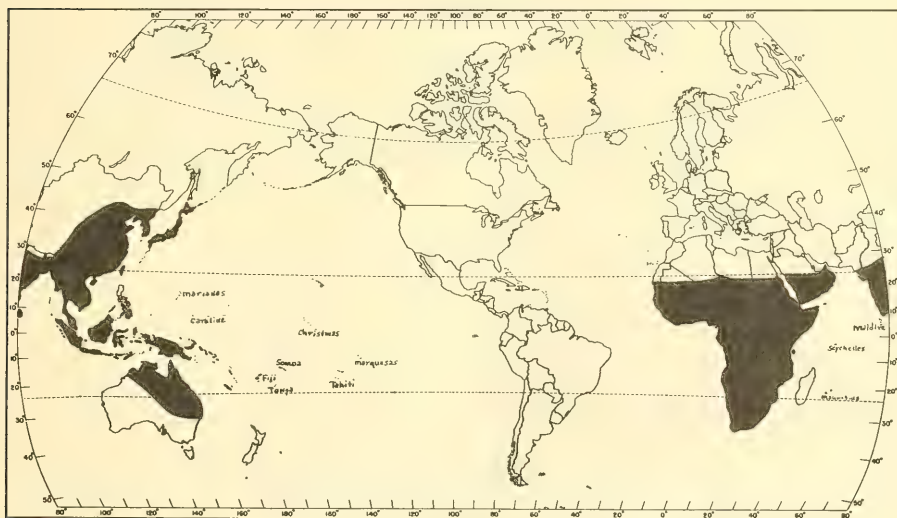
INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

PUMPKIN CATERPILLAR (*Diaphania indica* (Saunders))

Economic Importance: Generally this pyraustid is a pest of cucurbitaceous plants wherever it occurs. The pumpkin caterpillar is considered one of the more important pests of cucurbits in the Indian Region and has been reported as destroying cucumber fields in New South Wales, Australia. Damage to fruits of host plants is most prominent during August and September in India, though larvae may cause considerable leaf damage to hosts earlier in the season. Leaf injury was prevalent on watermelons in Queensland, Australia, in 1946. Leaf feeding on cotton is sometimes a problem in Japan and Africa.

Distribution: Widespread through Central and Southern Africa, Southern and Eastern Asia, Australia and many of the Indian and Pacific Ocean islands. including Mauritius, Seychelles, Carolines, Christmas, Fiji, Maldives, Marianas, Marquesas, Samoa, Tahiti, Tonga and Mindanao in the Philippines.

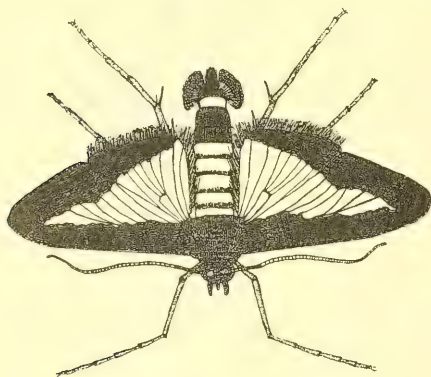
Hosts: Cultivated cucurbits are the most important hosts. Also feeds on wild cucurbits, beets, cotton, soybeans, eggplant, hibiscus, hollyhock and Arabian jasmine.



General Distribution of Pumpkin Caterpillar

Life History and Habits: The eggs are generally laid singly on the under-surface of the leaves, hatching in 3-6 days. Young larvae move about for some time, then fold the leaf or two adjacent leaves and begin feeding on the epidermis while in the fold. Damaged patches dry out and result in distortion. Larvae may also attack the young developing fruit or more advanced fruits except those that have a hard, resistant rind. The larvae pass through 4 or 5 instars in 9 to 14 days. Pupation takes place in a cocoon within the leaf-fold and lasts from 5 to 13 days, depending on the temperature. The adult life ranges from 3 to 7 days at a mean temperature of 81°F., and the oviposition period is about two days, each female laying about 159 eggs. In tropical regions, *D. indica* will probably breed throughout the year, but in Japan only 3 broods are produced annually. The insect hibernates as a partially developed larva in Japan.

Description: Wing expanse of the adult about 24 mm. length of body about 12 mm. Costal margin of the forewing banded dusky-drab; band continuous with the head and first two thoracic segments. Band also extends humeral margin of the forewing and the hindwing and is continuous on the 5th and 6th abdominal tergites. The rest of the wing is white with purple luster. A globular tuft of scales is present at the posterior end of the abdomen, in male the scales in the middle of the tuft are light colored and the entire appearance is orange. The eggs are oval, barium yellow in color, and average about 0.80 mm. Mature larva 18.5 mm., greenish with pair of longitudinal white stripes that are more or less parallel from the prothoracic region to the last abdominal segment. In some stages of larval development the white stripes may not be distinct. The head with 6 pair of ocelli, one pair posterior to the base of each respective antenna, remaining 5 pair still posterior in a semi-circle. Antennae 3-segmented. Segment 2 about $2\frac{1}{2}$ times longer than segment 1. Two small sensillae and 2 setae on tips of segment 2. Length of one seta about twice length of antenna. Segment 3 smallest antennal segment, with 3 apical sensillae. The mesothoracic and metathoracic tergites have a pair of black specks at the base of the subdorsal setae. Each body segment with 6 dorsal setae and 2 pairs of lateral setae, side by side. All setae arise from tubercles and form definite longitudinal rows. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies.). CEIR 8(39) 9-26-58



Adult



Larva and Pupa

Figures(except map): from Patel, R. C. and Kulkarny, H. L. 1956. Bombay Nat. Hist. Soc. Jour. 54(1):118-127.

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OCTOBER 3, 1958

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

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PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GRASSHOPPERS damaged wheat in Texas, Oklahoma and North Dakota. (p. 845).

EUROPEAN CORN BORER found for first time in three counties in Alabama.
(p. 845).

SPOTTED ALFALFA APHID found for first time in Oregon. (p. 847).

CODLING MOTH activity unusually heavy in Moscow area of Idaho, third-brood larvae largest in several years in central Virginia and damage severe in areas of Utah. (p. 848).

CABBAGE LOOPER heavy on beans in Delaware and damaging lettuce in areas of New Mexico and California. (p. 849).

Leaf crumple disease transmitted by WHITEFLIES causing reduction of cotton yield in Bard Valley, California. (p. 851).

BLACK TURPENTINE BEETLE most troublesome forest insect in Midsouth. (p. 851).

Larvae of a SAWFLY infesting 100,000 acres of pine in Taylor County, Florida.
(p. 852).

CORRECTION (p. 855). ADDITIONAL NOTES (p. 855).

INSECTS not known to occur in the United States. (p. 857).

WEATHER OF THE WEEK ENDING SEPTEMBER 29

Hurricane Helene, featuring last week's weather, brought heavy rains and damaging high tides as she roared past the Carolina coasts with wind gusts up more than 140 m.p.h. First reported as a west-northwestward moving tropical storm 550 miles east-southeast of the Bahamas on the 23d, Helene had gained hurricane intensity by 5 p.m., e.s.t., on the 24th when located about 425 miles east of Fort Pierce, Florida. The eye of the storm came within 30 to 40 miles of the North Carolina coast on the 26th and 27th, as she swung northeastward out over the Atlantic. At 5 a.m., on Sunday, the 28th, Helene was 230 miles east of Elizabeth City, North Carolina, moving northeastward and no longer a threat to the mainland of the United States. At 1 p.m., on the 27th, Frying Pan Light Ship, off Cape Fear, North Carolina and 20 miles southeast of the center of the storm, reported winds of 120 m.p.h., a confused sea and waves 25 feet high. During the evening of the same day, several sections between Cape Lookout and Ft. Macon, North Carolina, reported wind gusts over 140 m.p.h. A report from Wilmington, North Carolina, gave the fastest mile of wind as 85 m.p.h., from the north with a peak gust of 135 m.p.h., from the north-northeast, total rainfall for the storm of 8.29 inches and highest tide 9 feet above normal. It is too early to fully assess the damage caused by Helene, but heaviest losses occurred in coastal North Carolina and the following is a preliminary report submitted by the State Climatologist of that State: "No known deaths and only a few minor injuries in North Carolina. Preliminary semi-official estimates of property damage range from \$4 to \$7 million. Greatest damage to Wilmington, Southport and beaches from Cape Fear to Wrightsville Beach, but damage considerable along coast northward to Cape Hatteras. No estimate yet as to crop damage, but mostly confined to coastal counties." Timely warnings undoubtedly saved many lives, and permitted safety measures which greatly reduced property losses.

Temperatures for the week averaged above normal in coastal California, east of a line joining Denver, Colorado with Williston, North Dakota and Del Rio, Texas, and below elsewhere. Weekly departures generally were small, although as much as +6° in California and the upper Great Lakes and -6° at a few stations in the lower Rocky Mountain States. Hidden in these averages was the change to much cooler weather, with a touch of winter in most northern areas as successive surges of cold air from the northwest, in the course of the week, swept across virtually the entire country. Freezing was rather general in middle and northern interior sections of the Far West early in the week. On the 24th, minima ranged from 22° to 30° over nearly all of eastern Washington and from 10° to 20° at several stations in northern Nevada, with frost above 5,500 feet as far south as northern Arizona. The Salt Lake City, Utah, Airport recorded 31° on the 25th, an early season record. Snow fell in the middle and northern Rockies. Freezing extended into the northern Great Plains on the 25th, and frost and freezing were reported in central and western Nebraska and a few stations in northwestern Kansas on the 27th. The cooler weather reached the East over the weekend, when frost occurred in northern Indiana and freezing in the northern mountains of Pennsylvania and the cranberry bogs of New Jersey.

Precipitation, occurring along the rapidly moving cold fronts, fell on 1 or 2 days in most areas. Falls were light to occasionally moderate or heavy with few exceptions. Thus, much fair weather favored fall harvesting operations. Heavy rains, perhaps even heavier than the hurricane rains, fell in eastern New Mexico and the trans-Pecos region of western Texas, causing disastrous flooding at Presidio, Texas, and less serious flooding downstream from there in the Rio Grande. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - DELAWARE - Conocephalus brevipennis adults and nymphs prevalent in alfalfa and red clover throughout State. Melanoplus femur-rubrum common on young soybeans and alfalfa in Kent County. (MacCreary, Conrad). MONTANA - Adult survey indicated heaviest infestations occurred in southern, southwestern, northern and northeastern parts of State. Extremely spotted elsewhere. Approximately 150,000 acres of cropland were sprayed in northeastern area of State. Infestations not as severe or extensive in Madison, Broadwater and Meagher Counties as in 1957, although no control was practiced. Heavy rains in June and July affected development of Cammula pellucida. (PPC, West. Reg., Aug. Rpt.). TEXAS - Flight observed in Wheeler County September 16, moving southwest. (Preston, Russell). Damaged fall-sown wheat, especially around field margins in Ochiltree, Wheeler, Armstrong, Sherman, Moore and Deaf Smith Counties. (Garner, Thomas). Several species infesting soil bank land in Armstrong County, 15-25 per square yard. (Garner). OKLAHOMA - Averaged 4-6 to 10-12 per square yard in panhandle area road sides and field margins and up to 30-35 per square yard in one area of Cimarron County. Controls being applied. M. bilituratus, M. differentialis and M. bivittatus dominant species. Damage to grain sorghum heads light. Extensive damage to first 8-10 feet of margins of some fields of fall-seeded wheat necessitating reseeding. Lighter than during same period in 1957. No migratory flights observed. Sarcophaga kellyi affecting approximately 20 percent of population. (Frazier, Burke, VanCleave). NORTH DAKOTA - Continued to damage winter wheat in Bowman area, in southwestern part of State. (N. D. Ins. Rpt.). UTAH - Extremely numerous east of Spanish Fork and numerous on Mapleton bench, Utah County. M. bilituratus dominant species. (Knowlton). Control by farmers covered some 320,240 acres in 1958, with another 110,000 acres protected by Federal-State-County control program. (Thornley, Knowlton).

MORMON CRICKET (Anabrus simplex) - IDAHO - Infestations covering approximately 7,000 acres were found in Washington County on Pine, Keithley and Sage Creeks. Scattered crickets were found in Adams County in Indian Valley and near cultivated crops, covering approximately 3,000 acres. (PPC, West. Reg., Aug. Rpt.). WYOMING - Survey showed crickets in heavy to moderate numbers in several areas of Lincoln County. (PPC, West. Reg., Aug. Rpt.). NEVADA - Survey in 9 counties revealed a total of 10,000 acres infested. Bands were of moderate proportions and in some areas crickets were scattered and not banded. (PPC, West. Reg., Aug. Rpt.). UTAH - Infestations anticipated in Daggett, San Juan, Kane, Tooele, Washington and Uintah Counties covering 11,150 acres. Control covered 26,358 acres this season and protected a much larger area. (Thornley, Knowlton).

EUROPEAN CORN BORER (Pyrausta nubilalis) - WEST VIRGINIA - Fall survey completed. Larvae averaged 24.9 per 100 stalks in 109 fields surveyed in 14 counties. (W. Va. Ins. Sur.). ALABAMA - Found in grain sorghum in Tallapoosa, Elmore and Montgomery Counties. First records for these counties. (Grimes). KANSAS - Initial stops for fall survey in Wabaunsee County showed infestations as high as 60 percent. Counts averaged 1-3 per infested stalk. (Matthew). NORTH DAKOTA - Survey in Richland County showed 69 percent infestation and 138 borers per 100 plants. (N. D. Ins. Rpt.).

CORN EARWORM (Heliothis zea) - DELAWARE - Common in most alfalfa fields throughout State. Present in most soybean fields, no noticeable damage. (MacCreary, Conrad). ALABAMA - Considerably reduced on grain sorghum in central area. (Grimes). OHIO - Natural infestation in check plots of late sweet corn were 96 percent at Marietta September 25, 81 percent at Wooster September 19 and 52 percent at Toledo September 15. (Neiswander). KANSAS - Extremely light in corn fields examined in Jewell and Republic Counties. Very few infested

ears found. (Gates). Light in fields examined in Wabaunsee County. (Matthew). OKLAHOMA - Averaged 0-3 per 10 heads in grain sorghum in panhandle area. (VanCleave). Larvae averaged 2 per head in late sorghum in Chickasha area, Grady County. Sorghum reaching hard dough stage, populations declining. (Henderson). TEXAS - Light in grain sorghum in Brazos and Burleson Counties. (Randolph). UTAH - Infestation high in late sweet and field corn in Utah County. (Knowlton).

ARMYWORM (Pseudaletia unipuncta) - CALIFORNIA - Light on sorghum in Chino area, San Bernardino County. (Cal. Coop. Rpt.).

FALL ARMYWORM (Laphygma frugiperda) - DELAWARE - Continued heavy feeding in late field corn in Kent County. (MacCreary, Conrad). VIRGINIA - Medium in winter pasture in King George County. (Hall). ALABAMA - Considerably reduced on grain sorghum in central areas. (Grimes). OKLAHOMA - Averaged 0-2 per 10 heads in grain sorghum in panhandle area. (VanCleave). TEXAS - Medium in grain sorghum and corn in Brazos and Burleson Counties. (Randolph). Attacked fall-sown oats and pastures in Grimes and Washington Counties. (Hawkins).

SORGHUM WEBWORM (Celama sorghiella) - TEXAS - Averaged 10-15 per head in late grain sorghum in Brazos and Burleson Counties. (Randolph).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - KANSAS - Heavy in some fields in Sedgwick County. One field examined had near 75 percent infestation with 1-2 larvae per infested stalk. Some larvae have moved into root area for overwintering. (Eshbaugh).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Averaged 30-75 per stalk in some panhandle area grain sorghum fields. (Walton).

MITES - UTAH - Caused severe damage to corn in many Utah County fields. (Knowlton).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - NEW MEXICO - Averaged 1-2 per 10 sweeps in alfalfa fields in Mesilla Valley. (N. M. Coop. Rpt.).

ALFALFA LOOPER (Autographa californica) - WASHINGTON - Light damage at Othello. (Landis, September 5).

ALFALFA WEBWORM (Loxostege commixtalis) - VIRGINIA - Feeding on seedling alfalfa in some fields in Rockingham and Rockbridge Counties. (Morris et al.).

BEET ARMYWORM (Laphygma exigua) - TEXAS - Averaged 2-5 per sweep in alfalfa in Brazos County. (Randolph). CALIFORNIA - Light on alfalfa in Imperial Beach, San Diego County. (Cal. Coop. Rpt.).

VELVETBEAN CATERPILLAR (Anticarsia gemmatilis) - ALABAMA - Few adults observed on soybeans in Elmore County. (Grimes).

PEA APHID (Macrosiphum pisi) - DELAWARE - Decreased on alfalfa throughout State except in several fields along eastern seaboard where it remained quite heavy. (MacCreary, Conrad). VIRGINIA - Averaged 15-20 per sweep on old field of alfalfa and very light in 2 seedling fields in Rockingham County. Those on the seedling alfalfa fungus-infected. (Morris, Peterson). NEBRASKA - Building up in eastern third and southern regions of State, with 78-180 per sweep in east and 110-220 per sweep in Republican Valley. (Andersen). UTAH - Caused moderate damage in parts of Millard and Sanpete Counties. (Knowlton). NEW MEXICO - Generally light infestations in Dona Ana County appeared to be building up. Light in alfalfa in Taos County. (N. M. Coop. Rpt.). CALIFORNIA - Medium to heavy in alfalfa fields in Lassen County. (Cal. Coop. Rpt.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - NEBRASKA - Remained static in Republican Valley area, with up to 250 per sweep. (Andersen). KANSAS - Non-economic to light in alfalfa fields surveyed in one north central and 4 east central counties with 14-60 per 25 sweeps in established stands and one per linear foot of row in seedling stands. (Matthew). OKLAHOMA - None found in 8 fields of alfalfa examined in northwestern and panhandle areas. (VanCleave). OREGON - Collected for first time in State in Umatilla County, September 13. Scattered throughout area, damaged susceptible varieties. Det. L. M. Russell. (Capizzi). CALIFORNIA - Light on alfalfa at Imperial Beach, San Diego County. (Cal. Coop. Rpt.).

LYGUS BUGS (Lygus spp.) - DELAWARE - Nymphs and adults of L. lineolaris common to prevalent in alfalfa throughout State. (MacCreary, Conrad). NEBRASKA - L. lineolaris heavy, 5-7 per sweep, in Republican Valley area alfalfa. (Andersen). NORTH DAKOTA - Survey in western counties showed 0-0.5 L. lineolaris per sweep in alfalfa. (N. D. Ins. Rpt.). UTAH - Numbers decreased in many northern alfalfa fields. (Knowlton).

MEADOW SPITTLEBUG (Philaenus leucophthalmus) - WEST VIRGINIA - Survey of 45 fields in 14 counties showed State average to be 8.88 per 10 sweeps in forage crops. (W. Va. Ins. Sur.).

RAPID PLANT BUG (Adelphocoris rapidus) - DELAWARE - Nymphs and adults common to prevalent in alfalfa throughout State. (MacCreary, Conrad). NEBRASKA - Light, 4 per 10 sweeps, in Republican Valley area alfalfa fields. (Andersen).

FLEA BEETLES - DELAWARE - Systema blanda present in scattered fields of soybeans throughout the State. (MacCreary, Conrad). TEXAS - Attacked young wheat in Carson and Briscoe Counties. (Cowan, Ledbetter). OKLAHOMA - Chaetocnema sp. scarce, with little or no damage to fall plantings of rye in Payne County. (Henderson).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - DELAWARE - Prevalent on soybeans and alfalfa throughout State. (MacCreary, Conrad). OKLAHOMA - Averaged 4-8 per head in grain sorghum in panhandle area. (Henderson).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - TEXAS - Medium in alfalfa and severe girdling of stems in Brazos County. (Randolph).

RED-NECKED PEANUT WORM (Stegasta basqueella) - OKLAHOMA - Infested 32 percent of shoots and damaged 95-100 percent of buds in 2 fields of peanuts in Payne County. (Walton).

A SOD WEBWORM (Crambus mutabilis) - TEXAS - Caused considerable damage to St. Augustine grass lawns in Brazos County (Garner) and in Gonzales, Fayette, Washington and Milam Counties (Co. Agr. Agents).

A CHINCH BUG (Blissus leucopterus insularis) - MISSISSIPPI - Carried as Blissus spp., CEIR 8(37):798, has now been identified as this species. (Hutchins).

EUROPEAN CHAFER (Amphimallon majalis) - NEW YORK - Seasonal scouting revealed one infested location outside the Syracuse regulated area, in addition to those reported in July. This report covered flight observed in village of Chittenango, Madison County, directly east of finds in Manlius, Onondago County. (PPC, East. Reg., Aug. Rpt.).

WHITE GRUBS (*Phyllophaga* spp.) - TEXAS - *P. rugosa* heavy in wheat land prepared for planting in Roberts County. (Joyner). UTAH - Caused unusual amount of damage in Delta area lawns (Ogden) and damaged some lawns at Meadow and Holden and in Uintah County cemeteries (Knowlton). Infested lawns in Utah County. (Barlow).

WHITE-FRINGED BEETLES (*Graphognathus* spp.) - FLORIDA - A new infested area involving approximately 1,000 acres was found south of Marianna, Jackson County, and another new infestation of approximately 200 acres was found in Browndale area of Santa Rosa County. Survey showed an additional 2,942 infested acres in the State. (PPC, So. Reg., Aug. Rpt.). GEORGIA - A new infestation was found about 10 miles southeast of Vienna involving farmlands in Dooly and Crisp Counties and a new infestation was also found at Chamblee, De Kalb County. (PPC, So. Reg., Aug. Rpt.). LOUISIANA - Surveys in Acadia Parish revealed 3 additional infested properties involving 47 acres, bringing total infested acreage for parish to just under 200 acres. (PPC, So. Reg., Aug. Rpt.).

SOYBEAN CYST NEMATODE (*Heterodera glycines*) - NORTH CAROLINA - Two properties totaling 20 acres found infested in Pasquotank County, was first report in this county. An additional 100 infested acres were found in Camden County and 70 acres in Pender County. (PPC, So. Reg., Aug. Rpt.). TENNESSEE - Positive finds, involving 100 acres on one property in Haywood County and 60 acres on one property in Shelby County, were first reports for these counties. (PPC, So. Reg., Aug. Rpt.). ARKANSAS - Five additional infestations reported from Mississippi County. (PPC, So. Reg., Aug. Rpt.). MISSOURI - Five new infested fields involving 215 acres were found in Pemiscot County. (PPC, Cent. Reg., Aug. Rpt.).

FRUIT INSECTS

CODLING MOTH (*Carpocapsa pomonella*) - MICHIGAN - Increase in entries during first weeks of September. (Hutson). IDAHO - Activity unusually heavy in Moscow area this year. Normal control practices did not prevent infestation of fruit. (Barr, Manis). VIRGINIA - Third-brood larvae still entering apples in numbers. Largest third brood of this insect in several years in central part of State. (Bobb). UTAH - Damage moderately severe to apples in Utah, Tooele, Millard, Sanpete and Juab Counties. Severe in home orchards. (Knowlton).

APPLE MAGGOT (*Rhagoletis pomonella*) - PENNSYLVANIA - Very heavy infestation in Beaver County. (Adams, Sept. 20).

CALIFORNIA PRIONUS (*Prionus californicus*) - UTAH - Damaging roots of some fruit trees pulled in Salt Lake, Weber and Davis Counties this season. (Knowlton).

PEACH TWIG BORER (*Anarsia lineatella*) - OREGON - Caused late summer fruit damage in Oregon City peach orchards. (Foster).

WALNUT HUSK FLY (*Rhagoletis completa*) - CALIFORNIA - Adults taken in a trap in Sonora, Tuolumne County, in black walnut trees. (Cal. Coop. Rpt.).

RED-BANDED LEAF ROLLER (*Argyrotaenia velutinana*) - MICHIGAN - Late infestations in Grand Rapids, Benton Harbor and Pontiac. (Hutson).

SAN JOSE SCALE (*Aspidiotus perniciosus*) - PENNSYLVANIA - Heavy infestation of peach trees. Limbs killed in Beaver County. (Adams, Sept. 20).

ORCHARD MITES - CALIFORNIA - Brevipalpus lewisi and Tetranychus telarius heavy on pear trees in Hinkley, San Bernardino County. (Cal. Coop. Rpt.).
UTAH - Damage severe in Utah, Weber and Tooele County apple orchards, moderate in peach orchards. (Knowlton).

CITRUS BLACKFLY (Aleurocanthus woglumi) - MEXICO - Inspection of 128,954 citrus trees on 1,246 properties in the States of Tamaulipas, Nuevo Leon, Sonora and Baja California revealed 35 infested trees on 12 properties. No infestations were found near the International Border. (PPC, Mex. Reg., Aug. Rpt.).

Citrus Insect Situation, Lake Alfred, Florida, Third Week of September - FLORIDA RED SCALE activity increased sharply and level expected to remain high at least into November, CITRUS RED MITE and CITRUS RUST MITE increased. (Pratt, Thompson, Johnson).

TRUCK CROP INSECTS

CABBAGE LOOPER (Trichoplusia ni) - DELAWARE - Continued light feeding on cole crops throughout State. Fed heavily on lima beans in Sussex County. (MacCreary, Conrad). NEW MEXICO - Problem in lettuce fields in Dona Ana and Eddy Counties where adequate control measures are not used. (N. M. Coop. Rpt.). CALIFORNIA - Heavy on tomatoes in Woodland area, Yolo County. This species and Autographa californica medium and damaging lettuce in Watsonville area, Santa Cruz County. (Cal. Coop. Rpt.).

LOOPERS - VIRGINIA - Slight increase in populations in Northampton County. Adult emergence light, but hot, dry weather has been favorable to looper development. (Hofmaster).

DIAMONDBACK MOTH (Plutella maculipennis) - CALIFORNIA - Medium on broccoli in Santa Maria area, Santa Barbara County. (Cal. Coop. Rpt.).

CELERY LEAF TIER (Udea rubigalis) - CALIFORNIA - Medium on celery in Arroyo Grande area, San Luis Obispo County. (Cal. Coop. Rpt.).

A PYRAUSTID MOTH (Nomophila noctuella) - CALIFORNIA - Medium on celery in Arroyo Grande area, San Luis Obispo County, and lettuce in Salinas area and light on broccoli in Castroville area, Monterey County. (Cal. Coop. Rpt.).

CARROT WEEVIL (Listronotus oregonensis) - PENNSYLVANIA - Adults and larvae severe on celery, parsley and parsnips during September in Bucks County. (Menusan, Sept. 20).

BUCKTHORN APHID (Aphis abbreviata) - MICHIGAN - Troublesome in many potatoes during the past month. (Hutson).

GREEN PEACH APHID (Myzus persicae) - PENNSYLVANIA - Difficult to control on potatoes in Butler (Sept. 20) and in Lehigh Counties. (Adams). IDAHO - Increased on potatoes in Ashton and Grace areas, decreased in Mackay area and remained static in Teton Basin. (Bishop).

WATERLILY LEAF BEETLE (Galerucella nymphaeae) - OREGON - Probably this species, caused damage to potato, squash, rhubarb, bean, raspberry, strawberry, geranium and rose foliage in Clatsop County. (Every).

LEAF-FOOTED BUG (Leptoglossus phyllopus) - FLORIDA - Adults on 30 acres of eggplant at Hague, Alachua County, common on persimmon fruit at MacClenny, Baker County, and on goldenrod blooms throughout the State. (Fla. Coop. Sur.).

POTATO PSYLLID (Paratrioza cockerelli) - UTAH - Caused moderate damage to potatoes in Kanosh area of Millard County. (Rickenback, Knowlton).

MILLIPEDES - WASHINGTON - Severely damaged potato tubers at Medical Lake, Spokane County. (Telford, Sept. 19).

POTATO ROT NEMATODE (Ditylenchus destructor) - WISCONSIN - Positive identification of 6 cases located in 5 new fields and one old test field. Five cases are located in Langlade County and one in Portage County. (Wis. Coop. Sur.).

BEAN LEAF ROLLER (Urbanus proteus) - FLORIDA - Larvae averaged 1-2 per plant on 130 acres of snap beans at Hague, Alachua County. (Fla. Coop. Sur.).

FALL ARMYWORM (Laphygma frugiperda) - OKLAHOMA - Caused moderate defoliation to field peas in Payne County. (Coppock).

TOMATO FRUITWORM (Heliothis zea) - DELAWARE - Fed lightly on lima beans throughout State. (MacCreary, Conrad). NEW MEXICO - Generally light in Dona Ana County lettuce fields. (N. M. Coop. Rpt.). CALIFORNIA - This species and Pieris rapae medium on broccoli in Watsonville area, Santa Cruz County. (Cal. Coop. Rpt.). WASHINGTON - Cutworms reported as H. phloxiphaga in CEIR 8(35):764, have been determined as this species. (Klostermeyer).

MEXICAN BEAN BEETLE (Epilachna varivestis) - FLORIDA - Eggs, larvae and adults averaged one per plant on 35 acres of snap beans in Alachua County. (Fla. Coop. Sur.). DELAWARE - Remained common to prevalent on lima beans in Kent and Sussex Counties. (MacCreary, Conrad).

EUROPEAN CORN BORER (Pyrausta nubilalis) - DELAWARE - Caused heavy damage to a Sussex County red pepper planting and light to moderate damage to same crop elsewhere in State. (MacCreary, Conrad).

STRAWBERRY APHID (Pentatrichopus fragaefolii) - OREGON - Populations much lower than normal in Linn County. (Every).

GRANULATE CUTWORM (Feltia subterranea) - CALIFORNIA - Heavy in soil in San Diego, San Diego County. (Cal. Coop. Rpt.).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - LOUISIANA - First specimens of season were collected in gin trash from Vermilion Parish during week ending August 22. (PPC, So. Reg., Aug. Rpt.). ARKANSAS - At Homan station, 504 specimens were collected in 18 interceptions. Two interceptions were made at the Ogden station. (PPC, So. Reg., Aug. Rpt.). ARIZONA - Infested fields have been found adjacent to the known and original infestations reported in western Maricopa County in July. (PPC, West. Reg., Aug. Rpt.). MEXICO - In the States of Coahuila and Durango, inspection of 170,045 blooms in 51 locations in 5 municipios resulted in finding 4,959 larvae. Infestations were light to medium. Inspection of 16,200 green bolls in 198 locations in 20 municipios in the States of Coahuila, Durango and Chihuahua revealed total of 1,407 larvae in 14 of the municipios, infestations ranging from trace to medium. In the States of Nuevo Leon and Tamaulipas 158 lint cleaner inspections made at 30 locations in 5 municipios resulted in finding a total of 664 specimens. (PPC, Mex. Reg., Aug. Rpt.). OKLAHOMA - Gin trash and lint cleaner inspections resulted in positive finds in Caddo, Canadian,

Comanche, Grady, Jefferson, Logan, McClain and Stephens Counties. Like inspections showed positive finds in 18 south central and southwestern counties. Infestations varied from trace to moderate. Samples from Cotton, Comanche and Caddo Counties contained approximately 30 larvae per bushel of trash. (Pela).

COTTON APHID (*Aphis gossypii*) - NEW MEXICO - Generally light throughout Mesilla Valley. Honeydew a problem in a few fields. (N. M. Coop. Rpt.).

CABBAGE LOOPER (*Trichoplusia ni*) - CALIFORNIA - Large numbers killed by virus disease in Shafter area, Kern County, preventing buildup. (Leigh, Beards).

COTTON LEAF PERFORATOR (*Bucculatrix thurberiella*) - CALIFORNIA - Increased and treatment necessary in many Imperial County cotton fields. (Peterson).

SPIDER MITES (*Tetranychus* spp.) - NEW MEXICO - Generally light with spotty heavy infestations mainly on lower leaves in several cotton fields in Dona Ana County. (N. M. Coop. Rpt.).

WHITEFLIES - CALIFORNIA - Caused leaf crumple disease in Bard Valley. Many fields show serious reduction in yield. (Peterson). Buildup of parasites controlling these pests in cotton fields in Shafter area of Kern County. (Leigh, Beards).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

BLACK TURPENTINE BEETLE (*Dendroctonus terebrans*) - This species remains a serious and perplexing problem in many cutting areas of LOUISIANA and MISSISSIPPI. It is undoubtedly the most troublesome forest insect in the Midsouth today. In Mississippi on the Homochitto, DeSoto and Kitsatchie National Forests, these insects have displayed an increasing tendency to attack standing trees rather than freshly cut stumps. On parts of the Homochitto and on several industrial lands, this species infesting trees in areas where cutting has not been done in recent years. (South. For. Pest Rptr., Sept. 18). ARKANSAS - Activity apparently increased more than any of the major forest pests in the State. Control applied in Malvern, Rolla and Sheridan area. Infestations increased in Oden area on trees damaged by logging, and near Amity. (Ark. For. Pest Rpt., Sept.).

IPS Situation in the Midsouth - Gradually increasing but at a normal rate for time of year. Comparatively high concentrations of scattered infested trees and spot attacks occur locally in areas of below-normal rainfall and in the vicinity of lightening strikes. If late summer is hot and dry, Ips populations may be expected to increase. (South. For. Pest. Rptr. Sept. 18). ARKANSAS - An upswing in activity during August in several localities. Some control applied. In the Hope, Camden, El Dorado area Ips spp. also increased with about 160 acres affected in one place. Slight increase in infestations in southwest Arkansas. (Ark. For. Pest Rpt., Sept.).

SOUTHERN PINE BEETLE (*Dendroctonus frontalis*) - TEXAS - A beginning epidemic in the Big Thicket of east Texas has been brought under control. Occasional spot infestations continue to appear but are being quickly mopped up by cutting and spraying crews. ALABAMA - In central Alabama scattered small attacks currently exist but the situation is much improved over previous years at this season. MISSISSIPPI - Relatively scarce in southwest area. (South. For. Pest Rptr., Sept. 18).

PALES WEEVIL (*Hylobius pales*) - PENNSYLVANIA - This species, in combination with another beetle, again causing considerable injury to pines used for Christmas trees. (Udine).

PINE BARK WEEVILS - ARKANSAS - Adults attacking advanced pine reproduction in Clark County. Very light or not observed in most other areas. (Ark. For. Pest Rpt., Sept.).

OAK TIMBERWORM (*Arrhenodes minutus*) - VIRGINIA - Damaged oak trees used for hardwood flooring by a firm in Virginia. Det. R. A. St. George. (Amos).

ASIATIC OAK WEEVIL (*Cyrtopistomus castaneus*) - PENNSYLVANIA - Very abundant on coniferous trees and in houses in Schuylkill, Berks and Carbon Counties. (Menusan, Sept. 20).

A SCALE INSECT (*Nuculaspis californicus*) - CALIFORNIA - Occurred on pines as a heavy infestation in Napa, Napa County. (Cal. Coop. Rpt.).

A MOTH (*Dioryctria* sp.) - Larvae conspicuously injured twigs of long leaf pines of all sizes in parts of TEXAS, LOUISIANA and MISSISSIPPI. (South. For. Pest Rpt., Sept. 18).

GYPSY MOTH (*Porthetria dispar*) - NEW YORK - Within entire suppressive area, male moths recovered only in Delaware and Putnam Counties. In Delaware County, not included in 1957 spray eradication program, 43 male moths recovered at 12 sites in 5 towns, all at or near locations where captures were made during 1957 survey. In Putnam County, sprayed in 1957, single specimens were captured in Patterson and Putnam Valley. In generally infested area positive catches occurred only in Unionvale and Dover, Dutchess County, all located outside or immediately inside irregular area sprayed in 1957. No specimens were recovered on Long Island or outside regulated area of State. NEW JERSEY - An adult moth trapped near Hibernia on August 18, determined positive September 12. No additional moths taken in 17 traps set within three-quarter mile radius of positive find. (PPC, East. Reg., Aug. Rpt.). MICHIGAN - Since the first catch of 2 moths on July 31, 11 additional moths were caught in the Bath-Victor Township area in Clinton County, one in Windsor Township in Eaton County and one in Vevay Township in Ingham County, about 1½ miles inside a previously sprayed area. The Eaton County infestation is 2 miles south of nearest sprayed area. Last moth caught was on August 25. (PPC, Cent. Reg., Aug. Rpt.).

A PYRAUSTID MOTH (*Nomophila noctuella*) - WASHINGTON - Reared from Douglas fir near Nisqually. This is apparently the first record of this species attacking Douglas fir. Det. H. W. Capps. (Johnson, Sept. 19).

FALL WEBWORM (*Hyphantria cunea*) - NEW MEXICO - Defoliating branches of elm, poplar, mulberry and pecan trees throughout Mesilla Valley. (N. M. Coop. Rpt.).

NANTUCKET PINE MOTH (*Rhyacionia frustrana*) - Present in young loblolly and shortleaf pine plantations generally in the Midsouth. In some areas damaged foliage attracted considerable attention. In ARKANSAS, LOUISIANA and northern MISSISSIPPI, infestations reported on trees of all sizes. (South. For. Pest Rpt., Sept. 18). OKLAHOMA - Infestations averaging as high as 90 percent in some pines in Payne County. (Bieberdorf). TEXAS - Damage to young pines in Brazos County. (Davis).

PINE SAWFLIES - LOUISIANA - Many trees in several hundred acres of longleaf pine were defoliated in August near Alexandria by *Neodiprion lecontei*. (South. For. Pest Rpt., Sept. 18). FLORIDA - A sawfly (*Neodiprion prob. exitans*) in larval stage reported to be infesting over 100,000 acres of loblolly pine in Taylor County. (Dekle).

WALKINGSTICKS - PENNSYLVANIA - Quite numerous in forest trees in Tioga County. (Gesell, Sept. 18).

A GALL INSECT - TEXAS - Infesting leaves of oaks in Brazoria, Harris, Galveston and Navarro Counties. (Co. Agr. Agents).

BAGWORMS - ARKANSAS - Activity heavy again this year on cedar and related trees. Defoliation was seen in some areas across the northern area. (Ark. For. Pest Rpt., Sept.). ALABAMA - Light infestations of Thyridopteryx ephemeraeformis on cedars in Colbert County. (Grimes, Sept. 20).

ELM LEAF BEETLE (Galerucella xanthomelaena) - ARKANSAS - Increased activity in several areas of State. Larvae and adults were very numerous on most Chinese elms. (Ark. For. Pest Rpt., Sept.).

POPLAR TENT MAKER (Ichthyura inclusa) - NORTH CAROLINA - Defoliating willow locally in Caldwell County. (Scott, Rabb)

CATALPA SPHINX (Ceratomia catalpae) - DELAWARE - Feeding very heavily on catalpas in Sussex County. Many trees completely defoliated. (MacCreary, Conrad).

MIMOSA WEBWORM (Homadaula albizziae) - DELAWARE - Very heavy damage to mimosa and honeylocust throughout the State. (MacCreary, Conrad).

INSECTS AFFECTING MAN AND ANIMALS

BLACK WIDOW SPIDER (Latrodectus mactans) - OREGON - More abundant than normal in southern area. (Every).

EYE GNATS (Hippelates spp.) - CALIFORNIA - Heavy infestations of H. collusor and H. dorsalis on mammals in the Coachella Valley of Riverside County, Borrego Valley of San Diego County and El Toro area of Orange County. (Mulla).

MOSQUITOES - UTAH - Troublesome in Utah, Tooele, Cache, Uintah and Duchesne Counties. Mosquitoes entering homes in Cache and Box Elder Counties largely Anopheles freeborni. (Knowlton). NORTH CAROLINA - Aedes sollicitans biting in high numbers during mid-September. As many as 200 alighting per minute. (Ashton). MARYLAND - A horse died of encephalitis at Cambridge, September 23. (U. Md., Ent. Dept.).

HOUSE FLY (Musca domestica) - IDAHO - Very abundant and causing annoyance in Moscow area. (Homan, Chao, Blair). UTAH - Serious problem throughout Millard County. (Rickenbach). Generally troublesome throughout State, worse than in several years. (Knowlton).

HORN FLY (Siphona irritans) - OKLAHOMA - Averaged 300-400 per untreated range animal in northwestern and panhandle areas as well as in Payne and Canadian Counties. (Howell). UTAH - Still troublesome generally, fairly serious in Utah County. (Knowlton).

SHEEP KED (Melophagus ovinus) - UTAH - Numerous in Millard County farm herds. (Knowlton).

SCREW-WORM (Callitroga hominivorax) - ALABAMA - A slight spread has been reported. Infested animals found in Autauga, Elmore and Montgomery Counties. Sterile flies are being dropped over the infested and surrounding areas. (Grimes).

CATTLE LICE - UTAH - Troublesome in Millard and Uintah Counties. (Knowlton)

SOUTHERN FIRE ANT (Solenopsis xyloni) - TEXAS - Causing concern around homes in Wharton County. (Hermansen).

FIRE ANT (Solenopsis geminata) - TEXAS - Causing concern around homes and annoying livestock in Karnes, Galveston and Val Verde Counties. (Co. Agr. Agents).

STORED-PRODUCT INSECTS

INDIAN-MEAL MOTH (Plodia interpunctella) - KANSAS - Much heavier infestations than usual reported from Grant County. (Gates). NORTH DAKOTA - A severe infestation in 11 bins of CCC shelled corn in Ransom County. The corn had been in storage 3 years. (N. D. Ins. Rpt.).

YELLOW MEALWORM (Tenebrio molitor) - WYOMING - Infested several grain bins near Powell, Park County. (Davison).

KHAPRA BEETLE (Trogoderma granarium) - ARIZONA - Three new infestations were reported. (PPC, West. Reg., Aug. Rpt.).

BENEFICIAL INSECTS

PARASITES AND PREDATORS - OKLAHOMA - Hippodamia convergens averaged 2-5 per 10 sweeps in alfalfa and 1-3 per head in grain sorghum in panhandle and north-western areas, Nabis sp. 3-5 per 10 sweeps and lacewings 1-3 in alfalfa in same areas. (VanCleave). NEW MEXICO - Lacewings very numerous in Mesilla Valley cotton fields. Aphidius testaceipes parasitizing Aphis gossypii in Mesilla Valley cotton fields, with as many as 150-200 parasitized aphids per leaf in heavily infested fields. (N. M. Coop. Rpt.). UTAH - Lady beetles and Nabis spp. generally decreased in alfalfa fields. (Knowlton).

MISCELLANEOUS INSECTS

JAPANESE BEETLE (Popillia japonica) - GEORGIA - One beetle trapped in Clayton, Rabun County. TENNESSEE - One beetle trapped at rear of post office in Johnson City, Washington County, in eastern portion of State. (PPC, So. Reg., Aug. Rpt.). ILLINOIS - A new location of infestation was confirmed in a railroad yard at Bedford Park, south of Midway Airport. This was in addition to the 2 newly-infested areas reported in July, in which it is estimated 8 acres are infested in East Peoria and 5,000 to 8,000 acres infested in the Blue Island-Riverdale area. One beetle was trapped August 28 approximately 3 miles south of and outside of border band treated around the Sheldon area. INDIANA - Two new infested areas reported at Goshen and West Lafayette. IOWA - Total of 139 beetles captured at Fort Madison. Infestation outside treated area appears very light. MICHIGAN - To date 123 beetles have been found in Detroit area. One beetle was found in Benton Harbor and one was found in Delhi Township, south of Lansing, where subsequent beetles were found. Only one beetle was found in the Grand Rapids area this year. MISSOURI - Additional beetles have been trapped and hand-captured in Humboldt Street infestation in St. Louis. (PPC, Cent. Reg., Aug. Rpt.).

CRICKETS - TEXAS - Annoying merchants in Meridian, Bosque County. (Davis).

A STRAWBERRY ROOT WEEVIL (Brachyrhinus rugosostriatus) - OHIO - Entering residences in Cleveland area for winter shelter. (Rings).

VINEGAR FLIES - VIRGINIA - Medium to heavy and a nuisance in homes in Albemarle County. (Bobb).

MONARCH BUTTERFLY (Danaus plexippus) - WEST VIRGINIA - Migratory activities evident. One tagged specimen from Toronto, Canada, collected in Monongalia County. (W. Va. Ins. Sur.).

PEA WEEVIL (Bruchus pisorum) - WASHINGTON - Adults moving to hibernation quarters during August and September became a minor household pest in Palouse region. (Johansen).

PUSS CATERPILLAR (Megalopyge opercularis) - MISSISSIPPI - Causing considerable attention over northern portion of State. (Hutchins).

CORRECTION

CEIR 8(35):766 - PINK BOLLWORM - TEXAS - Last sentence should read: "The El Paso infestation appeared somewhat lighter than in 1957."

ADDITIONAL NOTES

MINNESOTA - Survey showed Melanoplus femur-rubrum dominant species in State, but M. bivitattus increased in all but north central and northeast districts, being predominant in one east central, 2 central and 3 northwest counties. M. differentialis built up in the southwest and to a lesser extent in the south central district. M. bilituratus found in several fields in 7 northwest counties, but populations were quite low. Populations of all species were greatly reduced in early instars due to cool wet weather and are very spotty and generally quite low, although a very few local areas showed heavy and severe populations with some damage to legumes and adjoining crops. With the exception of 4 relatively small scattered areas showing threatening populations, the State generally has a non-economic to light infestation and little crop damage was experienced. (Minn. Ins. Rpt.).

MARYLAND - MEXICAN BEAN BEETLE light and CORN EARWORM rare on soybeans at Aquasco, Prince Georges County. YELLOW-NECKED CATERPILLAR stripping tops of apple trees at Rockville, Montgomery County. (U. Md., Ent. Dept.).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Protoparce sexta	quinq.	Heliothis zea	vires.
ALABAMA									
Crossville 9/22	14	2					4	29	
FLORIDA									
Quincy 9/15		3				3		24	
ILLINOIS									
Urbana 9/19-25	30	7	4	36				85	
INDIANA (Counties)									
Orange 9/15-23	8	5	12	9	1	10	2	26	
Tiptecanoe 9/15-23	74	29	49	51	10			94	
KANSAS									
Garden City 9/18-23	16	19					1	98	
Hays 9/17-20,22-24	38	28						541	
LOUISIANA									
Baton Rouge 9/19-25			9		61			1	
Franklin 9/22,24			13		3				
Shreveport 9/24	13		1		7		1	9	
MISSISSIPPI									
Grenada 9/15-20	8	7						2	
Senatobia 9/12-18		4			2			9	
*State College 9/20-26	177	33	106	2	133	2		480	22
*Stoneville 9/19-25	50	10	8	1	51			25	1
NEBRASKA									
Alliance 9/10-12	94		3	21			2	245	
Kearney 9/11-17	51	98		24		6	6	1204	
North Platte 9/12-18	68	4	3	18	12	3	1	652	
Scotts Bluff 9/9-22	203	9		48	4		3	334	
NORTH CAROLINA									
Clayton 9/19-25	1	1	3					3	
Faison 9/19-25	6	3	13				1	2	1
SOUTH CAROLINA									
Charleston 9/15-26	91	36	31	1	107	50	19	241	6
Clemson 9/20-26	27	11	49	3	27	3	1	22	
Florence 9/21-27	73	19	50	6	86	5	2	173	4
TENNESSEE (Counties)									
Blount 9/16-22	40	28	32				12	76	
Cumberland 9/16-22	80	26	22	6		6	36	84	
Greene 9/16-22	76	10	56				32	44	
Johnson 9/16-22	458	70	162	16	32		2	86	
Madison 9/16-22	29	11	20	2			9	227	
Maury 9/16-22	21		3			6	12	36	
Robertson 9/16-22	32	16	124	8			12	312	
TEXAS									
Waco 9/20-26	55		41	20				131	

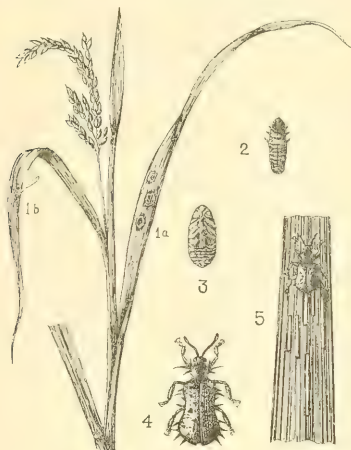
* Two traps - State College and Stoneville

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

RICE HISPID (*Dicladispa armigera* (Olivier))

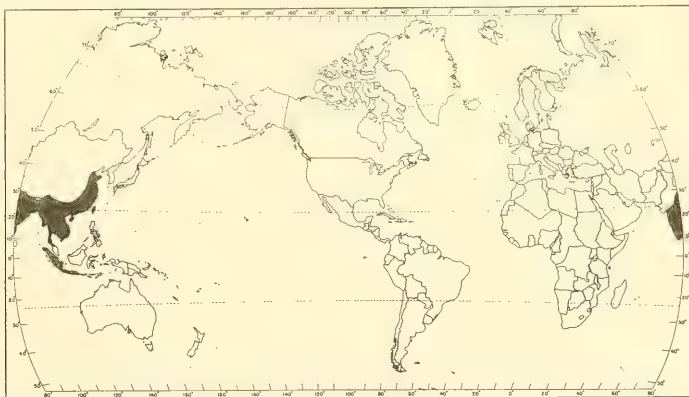
Economic Importance: This beetle is considered to be one of the most serious pests of rice in areas of India, Burma and East Pakistan. It sporadically causes serious losses to paddy rice, causing considerable damage to the leaves, particularly to rice that is standing in water. In southern Burma it is injurious practically every year from July to October and in East Pakistan from April to August. In July of 1925, 40 to 50 percent of the rice crop was lost in the Wenchow district of Chekiang, China. The pest is most injurious to rice when it is in the seedbed and just after transplanting in India and Pakistan. Large yellow spots, caused by larval mining, become evident on the leaves. The field becomes yellow, the plants wither and the leaves dry. Adult feeding causes additional leaf damage. Adults may become very abundant, at times, during the early spring when heavy migrations come from the waste-lands and surrounding jungles.

Distribution: Occurs throughout the southern and eastern part of India, Nepal, East Pakistan, Burma, Thailand, Indonesia, Indochina, Formosa and the coastal part of China.



Damage to Rice

(1a) Larval mines, (1b) Egg inserted in leaf tissue, (2) Mature larva, (3) Pupa, (4) Adult, (5) Adult leaf feeding.

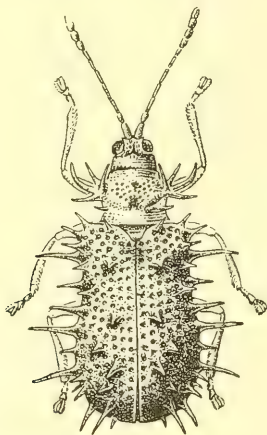


General Distribution of Rice Hispid

Hosts: Rice is the most important cultivated host, but it has also been recorded on turnips, jute, sugarcane and wild rice. Wild grasses are alternate hosts.

Life History and Habits: The eggs are laid singly on the upper surface of the leaf, each egg being inserted in the leaf tissue but almost exposed and easily visible. The egg hatches in 5-7 days and the larva mines between the upper and lower epidermis, forming a characteristic "blotch" appearance on the leaf. The larvae often emerge from the mines and crawl to other parts of the leaf or to fresh leaves. Pupation takes place in the leaf after 15 to 17 days. Generally speaking, the pest is dependent on moist conditions and attacks rice that is submerged in preference to rice on higher land from which the water has run-off. Soft-leaf varieties of rice are more susceptible to damage than the hard-leaf varieties. There are 3 or 4 generations annually in Formosa. The adult overwinters in wastelands or grasslands.

Description: The adults are small, 5 mm. from occiput to apex of elytra, metallic blue to black. Antennae are set closely together in front of head, with a small spine at the lower edge of basal antennal joint; no spines on antennal joints above. Prothorax with a single four branched spine (almost four single spines from one base) at each side in front and a single spine at each side behind. Prothorax otherwise unspined. Sides of elytra parallel, ends not truncate, numerous spines present. Larva flattened, white or yellow with black markings, first three segments broader than abdomen. Eggs oval, about 2 mm. long. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies.) CEIR 8(40) 10-3-58



Adult of D. armigera

Figures (except map): Adult from Kalshoven, L. G. E. 1951. De Plagen van de Cultuurgewassen in Indonesie. Vol. II, pp. 515-1065. Damage and immature stages from Narayanan, E. S. 1953. Indian Farming 3(5):8-13, 31.

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OCTOBER 10, 1958

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Cooperative
ECONOMIC INSECT
REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearinghouse and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

EUROPEAN CORN BORER found for first time in several Arkansas counties. (p. 861).

SPOTTED ALFALFA APHID found for first time in Washington. Causing some damage to alfalfa in several areas. (p. 862). Severe infestation of red clover in Oregon by CLOVER ROOT BORER. (p. 863).

A MEALYBUG (Heterococcus graminicola) reported from California for the first time. (p. 863).

CABBAGE LOOPER continues a problem in several areas. (p. 865).

ELM SPANWORM a problem in several Southeastern States. One million acres of hardwood forest may be defoliated in 1959.

CORRECTION (p. 868).

SURVEY METHOD - White pine weevil appraisal survey. (p. 871).

INSECTS not known to occur in the United States. (p. 873).

WEATHER BUREAU 30-DAY OUTLOOK

OCTOBER 1958

The Weather Bureau's 30-day outlook for October calls for temperatures to average below seasonal normals over most of the nation east of the Continental Divide except for near to slightly above normal in New England and along the South Atlantic coast. Greatest departures are indicated over the Central Plains. Above normal temperatures are predicted for West Coast States, and near normal in the inter-mountain area. Precipitation is expected to exceed normal over the eastern third of the nation and also in the west Gulf States. Subnormal amounts are predicted west of the Continental Divide and in the Northern Plains. In unspecified areas near normal precipitation is in prospect.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 a half year.

WEATHER OF THE WEEK ENDING OCTOBER 6

Last week's weather was unusually warm and dry in the Far West and cool and dry east of the Continental Divide, except in the Gulf and Atlantic Coastal States where 1 to 4 rainy days produced rainfall totals of an inch or more. Except for Arizona which reported up to an inch of rain at some southern and eastern points, the Far West received no rain at all. And temperatures for the week averaged from 3° to 10° above normal in the Pacific States. In California, abnormally warm weather has persisted for several months, and last week's anomalies which ranged up to 10° or more were the greatest this year to date. The warm weather also ended one of the warmest Septembers along California's coast, where San Francisco had its warmest month in history, San Diego its second warmest September, and Los Angeles its third warmest. Extending northward along the coast of Oregon, the hot weather pushed the mercury up to 99° at Brookings on September 30 and temperatures for the week there averaged 18° above normal. The hot, dry weather produced an extreme fire hazard in many areas. Three major fires broke out in California and before being controlled, 1 firefighter was killed near Newhall, 8 homes and 20 cabins near Monrovia were burned, and 14,000 acres of watershed land were blackened.

Cold air overspread all areas east of the Rockies except southern Florida early in the week, and low temperatures ranged from the teens in extreme north-central areas to freezing at points in Oklahoma, Arkansas, and Kentucky. This freeze was about 2 weeks early in many sections. Kansas reported its first snow of the season, a trace at Goodland on September 30, and flurries were general in the northern two-thirds of Minnesota on October 1. The lowest temperatures in the Northeast, however, occurred at the end of the week when another cold air mass moved across that section pushing the mercury down into the 20's at many inland stations. In the northern Great Plains, an almost rainless week prolonged the general need for rain there. Elsewhere in the Plains, the dry weather favored harvesting operations. Rains in the Gulf States interrupted farm activities. Tropical storm Janice, moving in a northerly direction across Cuba and the Bahamas, had gained hurricane intensity at 11:00 p.m. on October 6 e.s.t. when about 250 miles east of Palm Beach, Florida. At 5:00 a.m., October 7, e.s.t. she was about 330 miles east of Melbourne, Florida, moving northeastward about 17 mph. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - KANSAS - Populations practically non-existent in eight southeastern counties. (Matthew). TEXAS - Medium infestation of *Melanoplus bilituratus* on wheat in Hansford, Sherman, Moore, Dallam and Hartley Counties. (Russell). Medium infestation in Deaf Smith County. (Thomas). WISCONSIN - Well dispersed; extent of egg deposition unknown. (Wis. Coop. Sur.). NORTH CAROLINA - *Melanoplus* sp. abundant in Henderson County. (Thompson, Pake).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - KANSAS - Percent stalk infestation averaged 16.6 percent and average number of borers per 100 stalks was 26.6 in Anderson, Linn, Bourbon, Crawford, Cherokee, Labette and Neosho Counties. (Matthew). OHIO - Fall population low in Van Wert County; 24 fields of field corn intensively surveyed, averaged 14 larvae per 100 plants. (Triplehorn). ARKANSAS - Found for first time in Sebastian, Scott, Polk, Montgomery, Miller, Nevada and Howard Counties. Also found in corn in Hempstead County. Larvae found in young corn; early planted corn not infested. (Ark. Coop. Rpt., Sept. 27). WISCONSIN - Populations appear low. (Wis. Coop. Sur.).

CORN EARWORM (*Heliothis zea*) - DELAWARE - Common on corn and alfalfa in New Castle County. (Burbutis, Conrad). OHIO - Severe infestation on field corn at Lima. Otherwise, infrequently encountered in northwestern area. (Triplehorn). OKLAHOMA - Counts per head of grain sorghum averaged 0.1-0.3 in Hughes, Haskell and Pittsburg Counties and 1.6 in Tonkawa area. (VanCleave, Henderson). NEVADA - Heavy infestations present in field corn in Moapa Valley, Clark County. (Bechtel, Sept. 26). CALIFORNIA - Populations light to medium in corn in Upper Lake, Lake County. (Cal. Coop. Rpt.). Severe damage to corn in Chino area of San Bernardino County with heaviest populations in late corn. (Purnell). Heavy general populations in beans and light in grain sorghums in Robbins area of Sutter County. (Lindt).

ARMYWORM (*Pseudaletia unipuncta*) - NEVADA - Heavy infestation on timothy in Smith Valley area, Lyon County. Some fields damage very severe and larval migrations quite common. (Bechtel, Burge, Gallaway, Sept. 26).

FALL ARMYWORM (*Laphygma frugiperda*) - KANSAS - Damage observed in few corn fields in southeastern area. Infestations ranged from 4 to 8 percent. No ear droppage. (Matthew). ARKANSAS - Infestations in corn observed in 13 counties. Pest rather general in late corn but much less severe than in 1957. (Ark. Coop. Rpt., Sept. 27). Scattered infestations on young small grain in State. (Dowell, Sept. 27). TEXAS - Light damage on early oats in Zavala County in September. (Adam). Infestation present most early and volunteer grain fields in north central area, counts light to heavy. Two treated fields with considerable damage showing. Counts were 30-40 per linear foot of row. Early planted fields not very numerous. Later plantings of small grains not expected to be damaged. (Chada). Medium to heavy infestations in Brazos County. (Sistrunk). DELAWARE - Common on ears of late field corn throughout State. (Burbutis, Conrad).

SORGHUM WEBWORM (*Celama sorghiella*) - OKLAHOMA - Averaging from 3-10 per 10 heads some fields late grain sorghum in Hughes, Pittsburg and Haskell Counties to 30-50 per 10 heads some fields in Muskogee County. (VanCleave).

SOUTHWESTERN CORN BORER (*Zeadiatraea grandiosella*) - KANSAS - Found in 4 southeastern counties. Infestations averaged 4 percent in Crawford County, 5.6 in Cherokee County, 4.8 in Labette County and 0.8 in Neosho County. About 60 percent of larvae moved below ground level and girdled stalks beginning to lodge. (Matthew). ARKANSAS - Larvae below ground level most corn fields; about 60 percent winter phase. All instars found in younger corn. Lodging of corn less than in past 2 or 3 years. Severest lodging

observed was 18 percent in field in Sebastian County. Few fields of late corn as high as 60 percent infestation; lodging may be severe in these fields later. (Ark. Coop. Rpt., Sept. 27).

SOUTHERN CORNSTALK BORER (*Diatraea crambidoides*) - DELAWARE - Common in some fields of corn in Sussex County. (Burbutis, Conrad).

SAP BEETLES - UTAH - Conspicuous on sweet corn at Minersville, Beaver County. Common on corn at Green River, Emery County, and throughout Grand, Kane and Washington Counties. Some infestations as far north as Box Elder and Cache Counties. (Knowlton).

CHINCH BUG (*Blissus leucopterus*) - KANSAS - Adults active in several corn fields in southeastern area of State. Counts ranged from 40 to over 600 per stalk in infested fields. (Matthew). OKLAHOMA - Averaged 200-300 per stalk some fields of grain sorghum in Hughes County. (VanCleave). ARKANSAS - Observed on corn in southwest area. Numbers ranged from 0 to as high as 200-300 per plant in one field in Miller County. A few nymphs present. (Ark. Coop. Rpt., Sept. 27). TEXAS - Light infestations in small grain fields; numerous on volunteer sorghum plants in fields. (Chada).

CORN LEAF APHID (*Rhopalosiphum maidis*) - WASHINGTON - Was abundant on water-grass, now prevalent on fall grains, especially barley. (Landis). OKLAHOMA - Averaging 200-300 per stalk of grain sorghum some fields in Hughes County. (VanCleave). DELAWARE - Common on late field corn throughout State. (Burbutis, Conrad).

SORGHUM MIDGE (*Contarinia sorghicola*) - OKLAHOMA - Averaging 20-30 percent damage to heads of grain sorghum some fields in central and east central areas. (VanCleave). Many adults reared from heads of sorghum in laboratory in Payne County; none in fields. (Henderson).

ALFALFA CATERPILLAR (*Colias philodice eurytheme*) - OKLAHOMA - Averaging 2-3 per 10 sweeps some alfalfa fields in Muskogee County. (VanCleave). CALIFORNIA - Light infestation on alfalfa in Standish area of Lassen County. (Cal. Coop. Rpt.). UTAH - Moderately common in alfalfa fields. (Knowlton). NEW MEXICO - Averaged 2-3 per 10 sweeps in alfalfa fields at Gila and Cliff, Grant County, and about 1 per 10 sweeps at Animas and Rodeo, Hidalgo County. (N. M. Coop. Rpt.).

BEET ARMYWORM (*Laphygma exigua*) - CALIFORNIA - Light damage to alfalfa fields in Standish area of Lassen County. (Cal. Coop. Rpt.).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - WASHINGTON - Recorded for first time in State. Infesting alfalfa 8 miles along Columbia River, Plymouth to Whitcomb; 8 miles north of Columbia River into Horseheaven Hills; and from Wallula to College Place. (Klostermeyer, Cook). OREGON - Present in Umatilla, Gilliam and Morrow Counties. Economic damage light in two fields in Butter Creek area of Umatilla County. (Larson, Foster). CALIFORNIA - Infestations increasing in Vidal area of San Bernardino County. (Cal. Coop. Rpt.). Light to heavy spot infestations in Byron area of Contra Costa County. Not showing all fields. (Bell). NEVADA - Infestations generally light in Clark County except in drier fields in Moapa Valley where counts averaged 20-40 per stem. Spotted, light infestations present for first time this year in Douglas County. (Roberts, Betchel, Sept. 26). COLORADO - Counts per 100 sweeps in eastern area on September 24 were none at Greeley and Easton, 40 at Windsor, 20 at Platteville, 250 at Brighton and 10 at Loveland. (Exp. Sta.). UTAH - Light to moderate in Washington County. (Knowlton). OKLAHOMA - Averaging 0-25 per 10 sweeps some alfalfa fields in Garvin and Muskogee Counties. (VanCleave).

KANSAS - Found in nearly all alfalfa fields surveyed in southeastern area. Counts on established stands ranged to highs of 40 per sweep. Common in seedling fields; no feeding observed. Infested fields also found in Lyon and Wabaunsee Counties in east central area. (Matthew).

PEA APHID (Macrosiphum pisi) - KANSAS - Populations quite low all alfalfa fields surveyed. Counts ranged from 1 to 15 per sweep. (Matthew). UTAH - Increasing damage to alfalfa in scattered localities of several northern and central counties. (Knowlton). IDAHO - Abundant in three alfalfa hay fields near Glens Ferry and King Hill. (Edwards). NEW MEXICO - Generally light in most alfalfa fields in Luna, Hidalgo, Grant and Dona Ana Counties. Moderately heavy infestations at Rodeo, Hidalgo County. (N. M. Coop. Rpt.).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - OKLAHOMA - Averaged 8-15 per 10 sweeps some alfalfa fields in Garvin and Muskogee Counties. (VanCleave). NEVADA - Counts averaged from 15-60 per sweep in alfalfa in Moapa Valley, Clark County. (Bechtel, Sept. 26). NEW MEXICO - From 2-4 per sweep in alfalfa at Viriden and about 10 to 12 per sweep at Rodeo and Animas, Hidalgo County. (N. M. Coop. Rpt.).

CLOVER ROOT BORER (Hylastinus obscurus) - OREGON - Serious outbreak occurring in Marion County red clover seed fields. Fields planted in spring of 1958 being injured. (Ottaway).

GREEN CLOVERWORM (Plathypena scabra) - OKLAHOMA - Averaging 3-8 per 10 sweeps some alfalfa fields in Garvin and Muskogee Counties. (VanCleave).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - DELAWARE - Heavy flights on September 19 and common in soybeans and alfalfa in New Castle County. (Burbutis, Conrad).

SOD WEBWORMS - TEXAS - Heavy infestation in Gonzales, Willacy, Cameron, Hidalgo and Brazos Counties. (Hawkins, Johnson, Jordan). OREGON - Low populations, 0-5 larvae per 6-inch square, in Merion bluegrass and to a lesser degree in Chewings fescue seed fields in Marion County. Little injury occurring to seed grasses. (Dickason, Lattin).

RED-NECKED PEANUTWORM (Stegasta basqueella) - OKLAHOMA - Fifth-generation larvae infesting 20 percent of peanut terminals in Payne County. (Walton).

A MEALYBUG (Heterococcus graminicola) - CALIFORNIA - Collected in State for first time. Medium infestation on lawn grass in Davis, Yolo County. (Cal. Coop. Rpt.).

FALSE CHINCH BUG (Nysius ericae) - CALIFORNIA - Heavy infestation in pastures in Klamath area of Del Norte County. (Cal. Coop. Rpt.).

WHEAT CURL MITE (Aceria tulipae) - IDAHO - Widespread and fairly abundant on orchardgrass and quackgrass southeast and north of Moscow. Also on volunteer wheat south of Moscow. No evidence of wheat streak mosaic virus found during survey. (Foote).

BILLBUGS - OREGON - Damaging lawns in Benton County and Merion bluegrass fields in Marion County. Injury difficult to evaluate because of low populations most instances. (Dickason, Lattin).

WHITE GRUBS - VIRGINIA - Severe some lawns and forested areas in Patrick County. (Olinger). TEXAS - Phyllophaga rugosa causing heavy damage in lawns in Hidalgo County. (Hawkins).

FRUIT INSECTS

SHOT-HOLE BORER (*Scolytus rugulosus*) - NEVADA - Seriously damaging apple and peach trees in Sparks, Washoe County. (Hilbig, Sept. 26).

UNSPOTTED TENTIFORM LEAF MINER (*Callisto geminatella*) - PENNSYLVANIA - Several quite severe infestations on apple in Bedford County. (Udine).

Apple Insects Northern Virginia - Third brood of *Argyrotaenia velutinana* damaging apples in some northern orchards. About 5 percent of apples damaged on an area basis. All other apple insects were minor in northern orchards in 1958 except for *Anuraphis roseus* which, in the spring, accounted for one third of the crop in some orchards where controls were not applied or incorrectly applied. (Hough).

CODLING MOTH (*Carpocapsa pomonella*) - UTAH - Higher than normal in some Orem and Payson commercial apple orchards. (Davis, Knowlton).

MITES (*Tetranychus* sp.) - NEW MEXICO - Still active and feeding in several apple orchards near Albuquerque, Bernalillo County. (N. M. Coop. Rpt.).

RED-HUMPED CATERPILLAR (*Schizura concinna*) - CALIFORNIA - Severely defoliating prune and walnut in Yuba City area, Sutter County. (Cal. Coop. Rpt.). Scattered, light infestations of walnut trees in central and eastern Contra Costa County. (Bell, Ext. Serv.).

PEAR PSYLLA (*Psylla pyricola*) - CALIFORNIA - Local planting of pears in Orangevale, Sacramento County, severely damaged. (Moorehead, Ext. Serv.).

DRIED-FRUIT BEETLE (*Carpophilus hemipterus*) - CALIFORNIA - Heavy adult populations occurring in grapes in Gilroy, Santa Clara County. (Cal. Coop. Rpt.).

SMALL CHESTNUT WEEVIL (*Curculio auriger*) - MARYLAND - Larval emergence at peak, oviposition continues in Queen Annes County. Ground treatments have given more than 95 percent control, but damage shows in sprayed orchards. (U. Md., Ent. Dept.).

WALNUT CATERPILLAR (*Datana integerrima*) - TEXAS - Damaging pecan trees in Navarro County. (Burleson).

TRUCK CROP INSECTS

GARDEN SYMPHYLID (*Scutigerella immaculata*) - CALIFORNIA - Medium infestations in roots of peas in Watsonville area of Santa Cruz County. (Cal. Coop. Rpt.).

CORN EARWORM (*Heliothis zea*) - DELAWARE - Moderate to heavy feeding on late lima beans in New Castle County. (Burbutis, Conrad).

SPOTTED CUCUMBER BEETLE (*Diabrotica undecimpunctata howardi*) - DELAWARE - Prevalent on late lima beans in New Castle County. (Burbutis, Conrad).

A LEAFHOPPER (*Empoasca abrupta*) - CALIFORNIA - Light infestations damaging squash plantings in Anaheim area of Orange County. (Cal. Coop. Rpt.).

MELON APHID (*Aphis gossypii*) - CALIFORNIA - Heavy populations damaging melons in La Jolla area of San Diego County. (Cal. Coop. Rpt.).

CABBAGE LOOPER (Trichoplusia ni) - CALIFORNIA - Causing medium damage to potato plantings in Stronghold area of Modoc County. (Cal. Coop. Rpt.). Severe in cabbage in Chino area of San Bernardino County. (Purnell). UTAH - Injury above normal this season. (Davis, Knowlton). NEW MEXICO - Extremely heavy infestation in cabbage field at Deming, Luna County. (N. M. Coop. Rpt.). VIRGINIA - Some fields of broccoli and greens quite heavily infested on Eastern Shore. Control not satisfactory. (Hofmaster). MARYLAND - Population decreasing sharply on cabbage at Fairland. (U. Md., Ent. Dept.).

CABBAGE MAGGOT (Hylemya brassicae) - WASHINGTON - On fall turnips at Union Gap. (Landis).

POTATO ROT NEMATODE (Ditylenchus destructor) - WISCONSIN - Eight infestations found in Langlade County and one in Portage County to date in 1958. (Wis. Coop. Sur., Oct. 3).

PEPPER WEEVIL (Anthonomus eugenii) - CALIFORNIA - Medium infestations damaging bell peppers in the Oxnard area of Ventura County. (Cal. Coop. Rpt.).

ONION MAGGOT (Hylemya antiqua) - IDAHO - Almost completely destroyed about 40 acres of first-year seed onions in Parma area. About 20 percent of stand remains. All stages of larvae present. (Scott).

BEE T ARMYWORM (Laphygma exigua) - CALIFORNIA - Medium populations damaging potato plantings in Stronghold area of Modoc County, on lettuce in Borrego Springs area and on bell peppers in Encanto area of San Diego County. Heavy infestations on peas in Watsonville area of Santa Cruz County. (Cal. Coop. Rpt.).

A LEAF MINER - VIRGINIA - Heavy infestations reported in leaves of beets by a species of dipterous larvae, probably Pegomya hyoscyami, on August 18 in Bland County. (Morris).

WHITE GRUBS - IDAHO - Infesting small planting of sweetpotatoes near Parma. Approximately 65 to 74 percent of roots attacked, some roots completely destroyed. Species possibly Ligyris gibbosus. (Scott).

COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - OKLAHOMA - Averaging 30-70 percent infestation of squares and small bolls in late cotton fields in Sequoyah County. (VanCleave).

COTTON APHID (Aphis gossypii) - OKLAHOMA - Generally light in Sequoyah County. Heavy in spots one field. (VanCleave). NEW MEXICO - Generally light infestations on cotton throughout Dona Ana, Luna and Hidalgo Counties. (N. M. Coop. Rpt.).

CABBAGE LOOPER (Trichoplusia ni) - NEVADA - Spotted, medium infestation occurred in Pahrump Valley, Nye County. (Coop. Rpt., Sept. 26).

PINK BOLLWORM (Pectinophora gossypiella) - NEVADA - Survey of 2,684 acres with inspection of 4,857 bolls in Pahrump Valley, Nye County, and Moapa Valley, Clark County, was negative. Light trap collections also negative. (Coop. Rpt., Sept. 26).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - The epidemic that began in 1952-53 in western NORTH CAROLINA, eastern TENNESSEE, northeastern GEORGIA and northwestern SOUTH CAROLINA appears to have subsided. The epidemic in Tyrrell County, eastern NORTH CAROLINA, covered a 145-square mile area, involving 450 trees. Ground examinations of several of the infested areas revealed attacked trees contained very heavy broods and that at least 50 percent more trees with green needles had been injured. The epidemic is increasing and possibly 12,000 trees will be killed in 1958. (Southeast. For. Ins. and Dis. Newsl., Sept.).

A PINE BARK BEETLE (Pityophthorus carmeli) - CALIFORNIA - Reported as damaging stands of Monterey pines in area below Point Lobos Park in Monterey County. Damaging smaller branches and twigs and causing yellow flagging in the trees. (Dowdakin).

BLACK TURPENTINE BEETLE (Dendroctonus terebrans) - More reports received concerning activity in mountains in previous years in the Southeastern States. Control applied in two areas, the George Washington National Forest in VIRGINIA and the Chattahoochee National Forest in GEORGIA. Tree mortality almost negligible in both these locations. Infestations fairly heavy in western NORTH CAROLINA. (Southeast. For. Ins. and Dis. Newsl., Sept.).

ADLER FLEA BEETLE (Altica ambiens) - IDAHO - Very widespread in northern area. Adults still active on October 1. (Clark).

ORANGE-STRIPED OAKWORM (Anisota senatoria) - PENNSYLVANIA - Complete defoliation in a ten-square mile area of oak in Cumberland County, September 23. Pupae and larvae now present. (Drooz).

A FIR CONE MOTH (Barbara colfaxiana) - CALIFORNIA - Considerable damage to Douglas fir cones in Siskiyou and Shasta Counties. Practically 100 percent of seeds in cones examined were destroyed. (USFS).

NANTUCKET PINE MOTH (Rhyacionia frustrana) - TEXAS - Damaging young pines in Madison County. (Garrett).

ELM SPANWORM (Ennomos subsignarius) - Defoliation in GEORGIA, TENNESSEE and NORTH CAROLINA occurred on some 570,000 acres of hardwood forest during May and June, an increase of 270,000 acres over the affected area of 1957. Complete defoliation occurred in TENNESSEE near Sassafras Knob and west of Hiwassee Reservoir in NORTH CAROLINA. This year adult flights extremely heavy in Murphy, NORTH CAROLINA, and observed in Knoxville, TENNESSEE and Athens, GEORGIA. If the spread of the insect increases next year as in the past, it is quite possible that one million acres of hardwood forest will suffer measurable defoliation. (Southeast. For. Ins. and Dis. Newsl., Sept.).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - PENNSYLVANIA - Limbs killed on 30-foot spruces in Elk County, September 26. (Adams).

SARATOGA SPITTLEBUG (Aphrophora saratogensis) - PENNSYLVANIA - Severe injury to pines in Clarion County. (Drooz).

GALL INSECTS - TEXAS - Infesting leaves of oaks in Harris, Dallas, Freestone, Brazoria and Brazos Counties. (Co. Agr. Agents).

A BALSAM WOOLLY APHID (Chermes piceae) - NORTH CAROLINA - Severe mortality of Fraser fir on 1500 acres of Mt. Mitchell scenic and recreation area apparently due to this species. (Southeast. For. Ins. and Dis. Newsl., Sept.).

ELM LEAF BEETLE (Galerucella xanthomelaena) - ARKANSAS - Severe damage to Chinese elms in Arkadelphia. Lack of equipment resulted in poor control. (Ark. Coop. Rpt., Sept. 27).

MIMOSA WEBWORM (Homadula albizziae) - ARKANSAS - Defoliated majority of mimosas in Arkadelphia. (Ark. Coop. Rpt., Sept. 27).

HAWTHORN LACE BUG (Corythucha cydoniae) - OKLAHOMA - Abnormally heavy, for this time of year, on pyracantha in Payne County. (Walton).

SCALE INSECTS - MARYLAND - Aspidiotus perniciosus common on Japanese quince and many other ornamentals over State. (U. Md., Ent. Dept.). NORTH DAKOTA - A heavy infestation of Lecanium corni on green ash at Crosby in northwestern area. (N. D. Ins. Rpt.).

EUROPEAN EARWIG (Forficula auricularia) - MARYLAND - Additional specimens brought to Wheaton on yard furniture from out-of-State, September 30. These specimens and previous one (CEIR 8(39):836) regarded as interceptions. As far as known, this insect is not established in Maryland. (Bissell). WYOMING - Recently a problem in Evanston. (Davison).

INSECTS AFFECTING MAN AND ANIMALS

SCREW-WORM (Callitroga hominivorax) - NEVADA - Larvae from cattle and swine at Fallon, Churchill County; Caliente and Elgin, Lincoln County; and Dayton, Lyon County identified as this species. (Bechtel, Sept. 26).

HOUSE FLY (Musca domestica) - OKLAHOMA - Populations extremely high in sheltered areas in Payne and Sequoyah Counties. (Howell, VanCleave). IDAHO - Unusually abundant in Twin Falls. A nuisance in houses and office buildings within the city. (Gibson).

YELLOW JACKETS - UTAH - Annoying elk hunters and campers in some northern areas. (Knowlton).

FLEAS - OKLAHOMA - Numerous in some recently vacated homes in Payne County. (Howell).

STORED-PRODUCT INSECTS

CONFUSED FLOUR BEETLE (Tribolium confusum) - NORTH DAKOTA - A heavy infestation in newly stored oats at Williston. (N. D. Ins. Rpt.).

BENEFICIAL INSECTS

PREDATORS - OKLAHOMA - Hippodamia convergens averaging 4-8 per 10 sweeps in central and east central area. Nabis sp. averaging 0-6 per 10 sweeps in alfalfa in same area. (VanCleave). NEW MEXICO - Syrphid larvae averaged 2 per sweep in alfalfa fields heavily infested with pea aphids at Rodeo, Hidalgo County. (N. M. Coop. Rpt.).

MISCELLANEOUS INSECTS

GIANT HORNET (Vespa crabro germana) - TENNESSEE - Collected in light trap in Johnson County. (Bennett).

GREATER WAX MOTH (Galleria mellonella) - NORTH CAROLINA - Local infestation in beeyard in Polk County. (Stephen, Farrier).

CORRECTION

CEIR 8(39):834 - Heliothis zea - Colorado - Last sentence should read "This is the lowest second week September count average for the past 4 years."

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Anticarsia gemmatalis	Heliothis zea
ALABAMA							
Crossville 9/29	1						3
ARKANSAS							
Kelso 9/18-24	5	15			3		174
Fayetteville 9/18-24	12	12			28		69
FLORIDA							
Quincy 9/15,23,29	6	3					33
ILLINOIS							
Urbana 9/22-10/2	16	1	2	22	1		35
INDIANA(Counties)							
Orange 9/24-28	4		3	2			12
Tippecanoe 9/25-10/1	19	17	12	25	9		8
KANSAS							
Hayes 9/26-29		2					46
Manhattan 9/27-30							9
LOUISIANA							
Shreveport 9/26-10/2	3	1	1		13	2	26
Franklin 10/1	2						
Baton Rouge 9/26-10/2	4	7	5	1	57	33	19
MISSISSIPPI							
*Stoneville 9/26-10/2	15	3	2		47		23
NORTH CAROLINA							
Faison 10/2	104	63	7				9
SOUTH CAROLINA							
Florence 9/28-10/4	20	10	8	11	34	15	19
Clemson 9/27-10/3	14	6	8	4	15		14
Charleston 9/29-10/5	42	20	9		15	162	31
TENNESSEE(Counties)							
Madison 9/23-29	5		3				27
Maury 9/23-29		5	20				184
Robertson 9/23-29	10	8	12	4			38
Cumberland 9/23-29	20	10	22	2			82
Greene 9/23-29	66	12	40	4	2		32
Blount 9/23-29	6	14	28		10		24
Johnson 9/23-29	96	9	51	6			2
TEXAS							
Waco 9/27-10/3	13		16	30			60

ADDITIONAL COLLECTIONS: TEXAS - Waco (9/27-10/3) - Alabama argillacea - 335;
Pectinophora gossypiella - 422.

Uniform Survey Procedure Approved By
The Lake States Forest Insect Survey Committee - 1958

WHITE-PINE WEEVIL APPRAISAL SURVEY

PURPOSE:

The white-pine weevil has been a serious pest of pines and spruces in the Lake States for many years. Infestations can be severe in white, jack, Scotch, and red pines and in Norway spruce. Other species sometimes seriously damaged are Austrian pine and white spruce. Direct control measures to prevent attack have met with some degree of success. An appraisal survey is required to enable the forester and the entomologist to determine the degree of infestation to be used as a guide in making control recommendations.

INSTRUCTIONS:

Time of Survey

The time when weevil attack first becomes evident will depend on the locality, weather conditions, and tree species. For the Lake States in general this will be about mid-June. The effects of weeviling will be readily visible for the remainder of the season.

Method of Survey

This survey involves determination of the percentage of attack presently occurring in a plantation. Data obtained will be classified in categories representing light, medium, heavy, or no weeviling. The first sample is taken at least 1 chain from the edge of the planting. At this point the observer tallies 10 trees along the row. To establish the second sample 2 chains are paced from the last tree examined. Subsequent samples are taken in the same manner until the end of the row is reached. Additional sample lines are run through the planting at 5-chain intervals. When the plantation is not established in rows - some types of underplanting for example - and does not lend itself to line sampling, cluster samples of 10 trees should be taken along a compass line. The intervals should be the same as for regularly spaced rows. A minimum of one sample for each acre of plantation, having less than 1,000 trees per acre, is required for accurate results. Two samples are required for plantations having more than 1,000 trees per acre. The observer may obtain this average number of trees per acre by establishing, at random, three 1/50-acre circular plots (16.6 feet in radius) in each plantation.

Tallying Data Sheet

Each sample consists of 10 trees approximately 2 chains apart. Only the currently weeviled trees should be tallied.

Column: 1. Weeviled trees - current year's weeviling.

2. Non-weeviled trees - can be previously weeviled but not in the current year.

3. Cumulative total of weeviled trees - this column represents the total for the previous plots.

Example:	Plot number	Number weeviled	Cumulative total weeviled	Non- weeviled
	1	2	2	8
	2	3	5	7
	3	1	6	9

SUMMARY OF DATA

Categories for the seriousness of damage are based on percentage of weeviling arbitrarily established for this survey at the following levels.

Heavy - 25 percent or more of the sampled trees weeviled.

Medium - 10 to 25 percent of the sampled trees weeviled.

Light - Less than 10 percent of the sampled trees weeviled.

Determination of the needs for control will vary with values placed on individual plantations by the owner. (S. E. Banish, Wis. Conservation Dept.).

WHITE-PINE WEEVIL APPRAISAL SURVEY

Description: T. R. S. Forty: Date: _____

Host: Acreage: Age: Spacing _____

Average Height of Trees: Average Number of Trees Per Acre: _____

Plot Number	Number of Trees			Plot Number	Number of Trees		
	Weeviled	Cumulative Total	Non- Weeviled		Weeviled	Cumulative Total	Non- Weeviled
1				26			
2				27			
3				28			
4				29			
5				30			
6				31			
7				32			
8				33			
9				34			
10				35			
11				36			
12				37			
13				38			
14				39			
15				40			
16				41			
17				42			
18				43			
19				44			
20				45			
21				46			
22				47			
23				48			
24				49			
25				50			
TOTAL				TOTAL			

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

CABBAGE MOTH (*Mamestra brassicae* (L.))

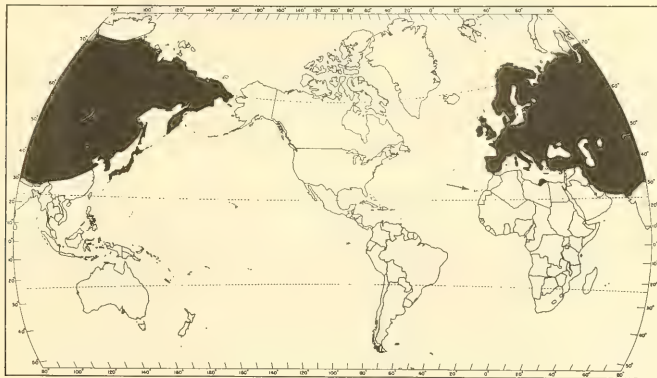
Economic Importance: The larvae of the cabbage moth are very destructive to vegetables, particularly cabbage and other crucifers, and ornamental flowers in Europe and Asia. Though injury is of less general importance, sugar beets, tobacco and hemp are sometimes heavily damaged. In the U.S.S.R., *Mamestra brassicae* is considered to be more injurious to cabbage than *Pieris brassicae* because the larvae bore into the heart of the plant to a greater extent. However, when populations are extremely numerous, whole plants may be destroyed. In Bulgaria the annual loss of cabbage attributed to this pest has been estimated at from 20 to 30 percent, with up to 80 percent loss in some badly infested localities. Larval counts have averaged up to 50 per plant in severe infestations in that country. *M. brassicae* has been taken with increasing frequency since 1945 at U. S. ports of entry, principally at Atlantic Coast ports.



Damage to Dahlia

Distribution: Occurs generally throughout Europe; also recorded in Libya, Turkey, Iran, Kashmir, West Pakistan, India (Punjab), China (Tibet and Northern China), Korea, Japan, Asiatic part of U.S.S.R. and the Canary Islands.

Hosts: This is a general feeder and will live upon many kinds of plants, both cultivated and wild. Crucifers probably suffer most, but tomatoes, tobacco, lettuce, onions, corn, hemp, soybeans, peas, vetch, flax and several ornamentals including calendula, gladiolus, geranium and lupine are quite often attacked.



General Distribution of Cabbage Moth

Life History and Habits: The life history of *Mamestra brassicae* as recorded in Bulgaria is as follows: The female deposits its eggs in 6 to 28 clusters, 15 to 188 per cluster. Females may deposit from 438 to several hundred eggs, generally on the underside of the leaf. Eggs hatch in 6 to 9 days. The larvae pass through 5 molts in 25 to 30 days, feeding on the leaves of the host plants or in some instances into the heads and stalks. Pupation takes place in the soil, 5 to 6 cm. deep. The pupal period during the summer averages about 27 days before emergence of the new generation. Hibernation takes place in the pupal stage. In Bulgaria two generations a year are normal, sometimes a partial third generation developing, while in Scotland one generation is usual with a partial second generation sometimes being produced. Characteristic damage to disc-shaped flowers involves feeding on the outer circumference at first and then uniformly, all around, gradually working inwards until nothing is left but the central disc of flowers.

Description: The adult wing expanse is about 44 mm. Forewing dark brown irrorated with gray; many blackish streaks and marks present. Subterminal line not defined by whitish on inner side. This character separates *M. brassicae* from *M. configurata*, a North American species which has subterminal line prominently defined by whitish on inner side. Orbicular spot is distinctly defined by black. Hindwing brown, pale at base with whitish fringe. Thorax color same as forewings. Abdomen brown with more or less distinct tufts down back, tip of abdomen distinctly tufted. Legs brown and very hairy at base. Fore tibia with long terminal claw. This character separates *M. brassicae* from the species of closely related genus *Polia*. Larvae vary greatly in color when mature, but always green when young. Mature larvae are about 30 mm. long and have three light lines with slanting black marks in each segment. Head is ochreous and horny, first segment blackish. Legs and prolegs green, spiracles pure white. Body surface smooth with few hairs. Pupa shining chestnut-brown, with occasional darker areas. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies.) CEIR 8(41)10-10-58



Adult and Larva of *M. brassicae*

Figures (except map): Adult and larva from Gt. Brit. Ministry of Agriculture and Fisheries. 1931. Cabbage Moth Caterpillars. Advisory Leaf. No. 70, 4 pp. Damage from Cameron, A.E. 1939. Insect and other Pests of 1938. Highland and Agr. Soc. of Scotland, Trans. Ser. 5, 51:136-174.

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OCTOBER 17, 1958

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GRASSHOPPERS damaged wheat in Oklahoma and New Mexico. Numerous and caused heavy defoliation of sagebrush along Boise River, Idaho. General flight noted at Amarillo, Texas, and egg-parasitism high in Nebraska. (p. 877).

FALL ARMYWORM damaged small grains in areas of Oklahoma and Texas. (p. 877).

New county records for SOUTHWESTERN CORN BORER in Arkansas (p. 877) and in Missouri (p. 883).

HESSIAN FLY survey in Kansas. (p. 878).

Additional infestations of SPOTTED ALFALFA APHID found in Washington. Three counties known infested in Oregon. (p. 878).

Damage to onions in Idaho by ONION MAGGOT averaged 30 percent for 1958 in Twin Falls area. (p. 881).

A TUSsock Moth infesting 12,000 acres of forest in Sandia Mountains of New Mexico. (p. 882).

CORRECTIONS. ADDITIONAL NOTES. (p. 883).

INSECTS not known to occur in the United States. (p. 885).

WEATHER OF THE WEEK ENDING OCTOBER 13

Several dry, sunny days with mild temperatures over most of the nation were favorable for rapid progress in harvesting bumper crops. The main exception was a stormy period from the 8th to 11th when a wintry blast of cold air from western Canada overspread the entire Country. Showers and strong winds preceded the cold air in northern areas including the Ohio Valley. Strong winds damaged the apple crop in Washington's Yakima Valley, and in the northern Great Plains, where speeds were estimated from 50 to 70 m.p.h. in places, they raised dust clouds, hampered harvesting and shattered some soybeans. Damaging thunderstorms and a few tornadoes occurred in the middle and upper Mississippi Valley. One person was killed by a tornado at Grant City, Missouri. Hail 3 inches in diameter damaged cars and homes near Ankeny, Iowa, and windstorms caused 1 death in extreme northern Illinois on the 9th, and local damage in New York State on the 10th and 11th. The incoming cold air reduced temperatures 10° to 20°, with freezing in most northern areas. Light snow was reported in extreme northern New England, and flurries in the upper Great Plains and Great Lakes region.

Precipitation, ranging up to more than 2 inches, fell in a wide belt extending from Texas to the Great Lakes. Other areas reporting moderate to heavy amounts included southern Florida, extreme northern New England and extreme northern areas west of the Continental Divide. Little or no rain fell in the remainder of the Country. In the western half of the Nation rising temperatures over the weekend reached record high levels for so late in the season at a number of stations in the northern Great Plains; on the 13th Valentine, Nebraska, had 93° and Bismarck, North Dakota, 89°. Hurricane Janice, 330 miles east of Melbourne, Florida, at 5:00 a.m., on October 7, continued in a northeasterly direction and did not seriously affect coastal areas of the United States. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - OKLAHOMA - Averaged 2-6 per square yard on roadsides and field margins in southwestern area. Caused severe damage to first 4-5 feet of margins in some fields of fall-seeded wheat in Caddo and Custer Counties. Melanoplus differentialis and M. bilituratus dominant species. (VanCleave). Egg laying by M. differentialis, M. bilituratus, M. bivittatus, M. femur-rubrum and M. packardii almost completed in central counties. (Coppock). TEXAS - General movement of M. bilituratus noticed in air over Amarillo. No definite direction. (Russell). IDAHO - Remained numerous along middle and south forks of Boise River. This is first year heavy defoliation of sagebrush by M. bilituratus has been noted. Defoliation covered several acres in numerous portions of infested area. (Evans). NEW MEXICO - Damaged borders of wheat fields near Mountainair, Torrance County, making replanting necessary. (N. M. Coop. Rpt.). NEBRASKA - Egg survey completed. Egg pod numbers corresponding to or exceeding adult counts achieved in all instances. Eggs in very good condition. Parasitism unusually high in all areas checked except in range areas, being heaviest in eastern and southern portions of infested area of State. In one instance as high as 80 percent, with 50 percent commonplace. (Bell). WISCONSIN - Adults continue to deposit eggs. (Wis. Coop. Sur.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - ARKANSAS - In northeast, infestations generally lighter in early-planted corn in 1958 than in 1957. (Ark. Ins. Rpt., Oct. 4). GEORGIA - Light in Meriwether County corn. (Blasingame, Sept. 9). KANSAS - Larvae averaged 64 per 100 stalks in 6 northeast counties surveyed. Stalk infestation averaged 35 percent. (Matthew). WISCONSIN - It appears that fall survey will reveal an all-time low. (Wis. Coop. Sur.).

CORN EARWORM (Heliothis zea) - DELAWARE - Common in alfalfa and red clover in most locations. (Burbutis, Conrad). OKLAHOMA - Averaged 0-3 per head in late grain sorghum fields in southwestern part of State. (VanCleave). UTAH - High in late sweet and field corn in central and northern parts of State. (Knowlton).

FALL ARMYWORM (Laphygma frugiperda) - ALABAMA - First-instar larvae heavy on volunteer corn in Lee County. (Guyton). Moderate on young oats in Lowndes County. (Grimes). OKLAHOMA - Caused severe damage to fall seeded wheat and rye in areas of Custer and Dewey Counties. (VanCleave). TEXAS - Caused serious damage to fall-sown oats in Comanche, Zavala and Bell Counties. (Co. Agr. Agents).

WEBWORMS - OKLAHOMA - Plentiful in 2 Washita County wheat fields. Webs and adults thicker than ever previously noted. (Hudson). TEXAS - Celama sorghiella caused some damage to late grain sorghum in Bell County. (Decker).

SOUTHERN CORNSTALK BORER (Diatraea crambidoides) - ALABAMA - Heavy in Lee County corn stalks, 19 larvae taken from 30 stalks examined. (Guyton).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - ARKANSAS - Continued eastward movement. Found for first time in Lawrence, Randolph, Clay, Greene, Poinsett, Cross and Crittenden Counties. (Ark. Ins. Rpt., Oct. 4).

CORN LEAF APHID (Rhopalosiphum maidis) - CALIFORNIA - Medium in sweet corn in Williams area, Colusa County. (Cal. Coop. Rpt.).

SORGHUM MIDGE (Contarinia sorghicola) - OKLAHOMA - Caused 5-20 percent damage to grain sorghum in Caddo, Blaine and Tillman Counties. (VanCleave).

DATE MITE (Oligonychus pratensis) - KANSAS - Probably this species, damaged wheat seedlings along field margins in Sheridan, Thomas, Gove and Rawlins Counties. (Gates).

HESSIAN FLY (Phytophaga destructor) - KANSAS - Survey showed that infested stems per 50-stem sample averaged 1.7 in northwest area, 1.1 in north central, 1.9 in northeast, 0 in southwest, 0.2 in south central and 12.1 in southeast areas. (Jones, Matthew).

WIREWORMS - KANSAS - Caused some damage to fall-seeded wheat in Jewell County area. (Gates).

SUGARCANE BORER (Diatraea saccharalis) - TEXAS - Averaged 2.5 percent infestation in Brazoria County rice. (Bowling).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - ALABAMA - Last-instar larvae observed in Lee County alfalfa. (Guyton). OKLAHOMA - Averaged 2-4 per 10 sweeps in some alfalfa fields in Grady and Caddo Counties. (VanCleave). NEW MEXICO - Averaged 2 per 10 sweeps in alfalfa fields near Estancia and Moriarty, Torrance County. (N. M. Coop. Rpt.).

GREEN CLOVERWORM (Plathypena scabra) - OKLAHOMA - Averaged 20-25 per 10 sweeps in some alfalfa fields in Grady and Caddo Counties. (VanCleave).

VELVETBEAN CATERPILLAR (Anticarsia gemmatilis) - ALABAMA - Caused light damage to soybeans in Escambia and Baldwin Counties. Most beans are beyond stage where serious damage can be caused. (Grimes).

PEA APHID (Macrosiphum pisi) - DELAWARE - Remained prevalent in several alfalfa fields in Sussex County. (Burbutis, Conrad). UTAH - More abundant recently in northern alfalfa fields. (Knowlton).

SPOTTED ALFALFA APHID (Therioaphis maculata) - VIRGINIA - Averaged 1.5 per sweep in one alfalfa field in Smyth County and 8-10 per sweep in 2 Washington County and 2 Scott County fields. (Bishop, Morris). ALABAMA - Light in Lee County alfalfa. (Guyton). OKLAHOMA - Averaged 0-50 per 10 sweeps in southwestern alfalfa fields. (VanCleave). ARIZONA - Populations in Yuma area very low since mild outbreak in late June, 1958. Extremely low at present time in most fields and apparently absent under normal collecting methods. Two fields noted with populations of about one winged adult per sweep. (Roth). CALIFORNIA - Medium on alfalfa in Maxwell area, Colusa County. Being controlled by parasites and predators in Lake County. (Cal. Coop. Rpt.). Light to heavy locally in Stanislaus County. Most severe in west side of county. (Stevenson). NEW MEXICO - Very light in alfalfa fields in Torrance, Taos, Bernalillo, Valencia and Socorro Counties. (N. M. Coop. Rpt.). OREGON - Surveys in eastern and central counties failed to uncover further infestations as of October 5. Gilliam, Morrow and Umatilla Counties known to be infested as of October 10. (Hammond, Foster). WASHINGTON - Additional infestations on alfalfa found at Benton City and Whitstran in Benton County, Burbank Heights in Walla Walla County and Harrah in Yakima County. (Klostermeyer). KANSAS - Found in nearly all alfalfa fields surveyed in 7 central and east central counties, with 12-150 per 25 sweeps. (Matthew).

FALSE CHINCH BUG (Nysius ericae) - IDAHO - Large numbers of nymphs in harvested red clover seed fields in Canyon County. (Waters).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - DELAWARE - Heavy in most plantings of soybeans and alfalfa throughout State, with up to 25 per 20 sweeps in Sussex County soybeans. (Burbutis, Conrad).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ALABAMA - Infestations on alfalfa light in Lee County. (Guyton). OKLAHOMA - Averaged from 7-12 per 10 sweeps in some alfalfa fields in Grady County to 30-35 per 10 sweeps in some Caddo County alfalfa fields. (VanCleave).

Peanut Insects in Oklahoma: A trace to 5 percent reduction in nut crop in some peanut fields in Caddo County due to a complex of Stegasta basqueella, Elasmopalpus lignosellus, Diabrotica undecimpunctata howardi and subterranean termites. (Walton).

ARMYWORM (Pseudaletia unipuncta) - TEXAS - Caused considerable damage to grass in Hidalgo County (Deer, Hawkins) and in Dimmit County (Harding).
CALIFORNIA - Heavy in lawns in Grass Valley, Nevada County. (Cal. Coop. Rpt.).

A GROUND PEARL (Margarodes meridionalis) - CALIFORNIA - Medium to heavy on St. Augustine grass lawns in El Centro. First record from this host in Imperial County. (Deal, Peterson).

VARIEGATED CUTWORM (Peridroma margaritosa) - CALIFORNIA - Medium in dichondra lawns in La Mesa, San Diego County. (Cal. Coop. Rpt.).

FRUIT INSECTS

FALL WEBWORM (Hyphantria cunea) - CALIFORNIA - Caused late damage to pear orchards in Big Valley area, Lake County. (Cal. Coop. Rpt.).

APPLE LEAF TRUMPET MINER (Tischeria malifoliella) - OKLAHOMA - Damaged 10-50 percent of leaves in an apple orchard at Nashoba, Pushmataha County. (Flora).

A LEAF ROLLER - NEW MEXICO - Damaged foliage and fruit in apple orchards in Albuquerque and Los Lunas. Losses as high as one-third of crop in some orchards. (N. M. Coop. Rpt.).

GREEN PEACH APHID (Myzus persicae) - WASHINGTON - Winged fall asexual migrants appeared, deposited young on peach. Start of fall flight a week to 10 days late. (Landis).

CALIFORNIA RED SCALE (Aonidiella aurantii) - TEXAS - Heavy on citrus fruit in Austin County. (Havran).

GREENHOUSE THRIPS (Heliothrips haemorrhoidalis) - CALIFORNIA - Heavy on avocados in Carpinteria area of Santa Barbara County. (Goodall).

BLACK-MARGINED APHID (Monellia costalis) - OKLAHOMA - Averaged 15-20 per leaflet on Payne County pecans. (Bieberdorf).

BLACK PECAN APHID (Melanocallis caryaefoliae) - ALABAMA - An extremely heavy infestation observed on several varieties of pecans in Lee County. Almost all leaves severely damaged. Winged and wingless forms plentiful. (Guyton).

RED-HUMPED CATERPILLAR (Schizura concinna) - CALIFORNIA - Medium larval infestations damaged foliage of English walnut trees in Colusa area, Colusa County. Several limbs of scattered trees defoliated in El Dorado County. Damaged young orchards, causing sunburn to trunks in Lake County. (Cal. Coop. Rpt.).

NAVEL ORANGEWORM (Paramyelois transitella) - CALIFORNIA - Medium on walnuts in Concord, Contra Costa County. (Cal. Coop. Rpt.).

WALNUT CATERPILLAR (Datana integerrima) - TEXAS - Damaged pecans in Comanche County. (Dickson).

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - Taken in trap in Mountain Ranch area of Calaveras County. (Cal. Coop. Rpt.). UTAH - New infestation found in black walnuts at Provo, Utah County. Previous infestations only around Ogden, Weber County. (Knowlton, Barlow).

TRUCK CROP INSECTS

LIMA-BEAN POD BORER (Etiella zinckenella) - CALIFORNIA - Caused extensive damage in bean-growing area of Orange County. (Campbell).

MEXICAN BEAN BEETLE (Epilachna varivestis) - ALABAMA - Caused moderate damage to snap beans in Escambia County. (Rawson, Grimes). Moderate on field peas in Lee County. (Guyton).

BANDED CUCUMBER BEETLE (Diabrotica balteata) - ALABAMA - Heavy on fall cucumbers in Escambia County. Most plants beyond serious injury. (Rawson, Grimes).

BEET LEAFHOPPER (Circulifer tenellus) - COLORADO - Migration into western part of State caused heavy losses over a widespread area in several crops, particularly tomatoes. In eastern part of State, caused some loss in sugar beets and tomatoes. Affected areas are small compared with those in western portion of State. (Exp. Sta., Sept. 30).

TOMATO FRUITWORM (Heliothis zea) - DELAWARE - Prevalent in pepper fruits in some Kent and Sussex County fields. Heavy feeding on lima bean pods in New Castle County. (Burbutis, Conrad). FLORIDA - Larvae fed on young fruits and blooms of eggplant in 30 acres inspected at Evinston, Alachua County. (Fla. Coop. Sur.). TEXAS - Second and third-instar larvae light on tomatoes in Dimmit County. (Harding). CALIFORNIA - Caused medium damage to lettuce in Santa Maria area, Santa Barbara County. (Cal. Coop. Rpt.). COLORADO - Populations have been lower than in some previous years. Caused some damage to corn and little or none to tomatoes. In Arkansas Valley, egg counts per 100 leaves dropped from 5.5 to 1.5 on tomatoes, September 30. Increased to an average of 5.6 per 100 leaves in Prowers, Bent, Otero and Pueblo Counties, October 7. (Exp. Sta.).

POTATO PSYLLID (Paratrioza cockerelli) - COLORADO - Spring movements of high adult populations indicated there could have been heavy losses in potato and tomato yields. Timely and repeated insecticide applications apparently had a beneficial effect. Losses that have occurred in spotted areas of the State have been the result of negligence in applying insecticides. (Exp. Sta., Sept. 30).

BLACK CUTWORM (Agrotis ypsilon) - ALABAMA - Heavy on turnips in Escambia County. Stand being considerably reduced. (Grimes).

TURNIP APHID (Rhopalosiphum pseudobrassicae) - ALABAMA - Moderate on turnips in Escambia County. (Rawson, Grimes).

CABBAGE LOOPER (Trichoplusia ni) - ALABAMA - Light on Lee County field peas. (Guyton). TEXAS - Light to medium on cabbage in Zavala County (Harding) and on lettuce in Deaf Smith County (Thomas). CALIFORNIA - Very numerous in some untreated cauliflower fields in Orange County, with as many as 25 larvae per plant. (Campbell). UTAH - Damage more common this season than usual. (Davis, Knowlton).

IMPORTED CABBAGEWORM (Pieris rapae) - DELAWARE - Larvae continued to feed on most cabbage and broccoli plantings in State. Adults common. (Burbutis, Conrad).

SOUTHERN CABBAGEWORM (Pieris protodice) - CALIFORNIA - Larvae caused medium damage to broccoli in Santa Maria area of Santa Barbara County. (Cal. Coop. Rpt.).

A FALSE CHINCH BUG (Nysius sp.) - CALIFORNIA - Heavy on lettuce in Watsonville area of Santa Cruz County. (Cal. Coop. Rpt.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - DELAWARE - Remained heavy in most fields of peppers throughout State. Feeding restricted mostly to fruits, causing considerable rot. In conjunction with disease accounts for rather heavy losses in this crop. (Burbutis, Conrad).

PEPPER WEEVIL (Anthonomus eugenii) - CALIFORNIA - Damaged peppers in Ventura County. (Campbell).

SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons) - DELAWARE - Abundant in carrots, Kent County. (Burbutis, Conrad). COLORADO - Populations have been relatively low compared with 1957. Incidence of aster yellows in some localized areas has been particularly striking. (Exp. Sta., Sept. 30).

ONION MAGGOT (Hylemya antiqua) - IDAHO - Inspections in Twin Falls area indicate damage to harvested onions averaged up to 30 percent for 1958. Some fields so heavily damaged during season they were plowed up and heavy reductions in stands planted for bulbs for 1959 seed crop have been noted. (Hunt, Evans).

SALT-MARSH CATERPILLAR (Estigmene acrea) - WASHINGTON - Built up rapidly and more abundant than for several years. Damaged some vegetables, flowers and weeds in Wenatchee area. (Anthon).

COTTON INSECTS

COTTON APHID (Aphis gossypii) - ALABAMA - Heavy on cotton in southern and central counties. (Rawson, Grimes).

COTTON LEAFWORM (Alabama argillacea) - ALABAMA - Extremely heavy infestations observed in Escambia and Monroe Counties. Light as far north as Autauga County. (Rawson, Grimes).

PINK BOLLWORM (Pectinophora gossypiella) - TEXAS - Infestation high in late-formed green bolls in Wharton County. Few larvae in late-forming squares and as high as 6 per green boll in Brazos River bottom area. In fields where boll weevil treatment had ceased in McLennan County, larvae averaged 3 per green boll, with as high as 10 per boll. (Adkisson).

COTTON SQUARE BORER (Strymon melinus) - CALIFORNIA - Caused light damage to cotton in Modesto area, Stanislaus County. (Cal. Coop. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

PINE WEBWORM (Tetralopha robustella) - VIRGINIA - Caused about 40 percent mortality in 3 separate loblolly pine plantations in Surry County. (Va. Div. For., Sept. Rpt.).

RED-HEADED PINE SAWFLY (Neodiprion lecontei) - NORTH CAROLINA - Defoliating scattered small trees in Wake, Granville and Person Counties. (Green). MARYLAND - Larvae infesting ornamental pine at Centreville, Queen Annes County. (U. Md., Ent. Dept., Oct. 6).

SITKA-SPRUCE BEETLE (Dendroctonus obesus) - CALIFORNIA - Caused severe damage and killed large single trees in coastal area of Del Norte County. (Martin).

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - VIRGINIA - Active in scattered trees in Nelson County. Activity increased in several loblolly pines in Norfolk County. (Va. Div. For., Sept. Rpt.).

A TUSsock MoTH (Hemerocampa sp.) - NEW MEXICO - Moderate infestation of 12,000 acres in Sandia Mountains. Egg masses moderate to heavy. (N. M. Coop. Rpt.).

FULLER ROSE BEETLE (Pantomorus godmani) - CALIFORNIA - Heavy and cutting leaves of variegated ivy in Riverside, Riverside County. (Cal. Coop. Rpt.).

A SPRUCE NEEDLE MINER - OREGON - Probably Taniva albolineana caused damage to ornamental spruce in central and eastern counties. (Every).

ELM CALLIGRAPH (Calligrapha scalaris) - OKLAHOMA - Averaged 200-300 per tree in crevices on bark on trunks of some Blaine County American elms. (VanCleave).

ELM LEAF APHID (Myzocallis ulmifolii) - OKLAHOMA - Averaged 2-7 per leaf on Payne County elms. (Howell).

INSECTS AFFECTING MAN AND ANIMALS

HORN FLY (Siphona irritans) - OKLAHOMA - Averaged 50-300 per feeder and dairy animal in southwestern area of State (VanCleave) and 500 per untreated animal in Pushmataha County (Flora). MARYLAND - Bothering mature beef cows at Upper Marlboro, Prince Georges County. (U. Md., Ent. Dept.). KANSAS - Averaged about 100 per infested animal on range cattle in Osage, Waubensee, Geary and Dickinson Counties. (Matthew).

SCREW-WORMS (Callitroga spp.) - NEW MEXICO - Ranchers continue treating infested cattle in Sierra and northern counties. (N.M. Coop. Rpt.). KANSAS - C. hominivorax larvae found in Marion County. (Ratcliff).

STABLE FLY (Stomoxys calcitrans) - OKLAHOMA - Averaged 20-300 per feeder and dairy animal in southwestern part of State. (VanCleave).

STORED-PRODUCT INSECTS

KHAPRA BEETLE (Trogoderma granarium) - WASHINGTON - Ten thousand bags of infested rice originating in Pakistan were unloaded at Takoma, September 17. Larval specimens were verified September 19, by which time 13 freight cars had been shipped to Vancouver, B. C. U. S. Plant Quarantine Division notified Canadian officials and cars were to be fumigated upon arrival. The remainder of the shipment, the 2 ships and unloading equipment were fumigated. The dock was thoroughly saturated with a strong malathion spray solution. Close watch will be maintained at the dock and environs for any larvae that may have escaped. (Busdicker).

A FOREIGN GRAIN BEETLE (Ahasverus advena) - TENNESSEE - Found on hams in Wilson County. (Bennett).

BENEFICIAL INSECTS

PREDATORS AND PARASITES - OKLAHOMA - In southwestern alfalfa fields Hippodamia convergens and Nabis spp. averaged 0-8 per 10 sweeps and lacewing adults 0-10 per 10 sweeps. (VanCleave). WASHINGTON - Typhlodromus occidentalis unusually abundant and feeding on orchard mites on tree fruits in Wenatchee area during past summer. (Anthon).

MISCELLANEOUS INSECTS

PSYLLIDS - WISCONSIN - Adults becoming numerous where hackberry trees are abundant in city plantings and are entering homes. (Wis. Coop. Sur.).

A SYMPHYLID (Symphylella sp.) - NORTH DAKOTA - First record of class Symphyla for the State. Immature specimens collected from sod at Northwood, Grand Forks County, via Berlese funnel, April 11, 1958. Det. A. E. Michelbacher. (Post).

CORRECTIONS

CEIR 8(37):797 - WEBWORMS - VIRGINIA - Nomophila noctuella should be substituted for Loxostege similalis. Det. H. W. Capps. (Morris).

CEIR 8(39):837 - SCREW-WORM (Callitroga hominivorax) - Determined as Phormia regina by H. M. Brundrett.

CEIR 8(41):872 - Author for white-pine weevil appraisal survey should be S. E. Banash.

ADDITIONAL NOTES

MISSOURI - SOUTHWESTERN CORN BORER found for first time in Dunklin and Ripley Counties, marking easternmost advance of this pest and establishing it as a potential pest of corn in the Mississippi delta farming area of the extreme southeast section of the State. Infestation was low and all larvae were of the summer form and taken from late-planted corn only. CHINCH BUG adults and nymphs averaged 55-300 per stalk in one field of late corn in southern Dunklin County. EUROPEAN CORN BORER infestation of late-planted corn in southeastern section of State ranged 35-95 percent with 1-6 third to fifth-instar larvae per stalk. The later the planting the heavier the infestation. (Thomas).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Alabama argillacea	Heliothis zea
ALABAMA							
Crossville 10/6	2	1			1		
ARKANSAS							
Fayetteville 9/25-10/1	3	1			6		12
Kelso 9/25-10/1		9		6	19		34
FLORIDA							
Quincy 10/6	7						14
ILLINOIS							
Urbana 10/3-9	15	20	1	29			98
INDIANA(Counties)							
Orange 9/29-10/4	6	5	1	3			1
Tippecanoe 10/2-8	149	63	36	53	5		391
MISSISSIPPI							
Senatobia 9/27-10/3							2
*State College 10/4-10	26	11	13		125		143
*Stoneville 10/3-9	99	29	20	2	189	49	253
NEBRASKA							
Alliance 9/13-25	135	4	1	12			103
Concord 9/13-26	17	14		24			1257
Kearney 9/18-28	11	24	1	5	1		411
North Platte	448	184	3	116	21		753
9/19-10/2							
Scotts Bluff 9/9-15,	352	37		68	4		342
9/30-10/6							
SOUTH CAROLINA							
Clemson 10/4-10	17	5	11	1	21	6	4
Florence 10/5-11	58	54	18	6	55	882	29
TENNESSEE(Counties)							
Blount 9/30-10/6	8	6	26		18		28
Cumberland 9/30-10/6	6	4	2				24
Greene 9/30-10/6	16		16	16	14		28
Johnson 9/30-10/6	49	4	54	6	33		17
Madison 9/30-10/6	4		7				68
Maury 9/30-10/6	2	4		1			18
Robertson 9/30-10/6	10	4	6		8	2	82
TEXAS							
Waco 10/4-10	60		32	44		5795	307

ADDITIONAL COLLECTION: SOUTH CAROLINA - Florence (10/5-11) - Anticarsia
gemmatilis - 148.

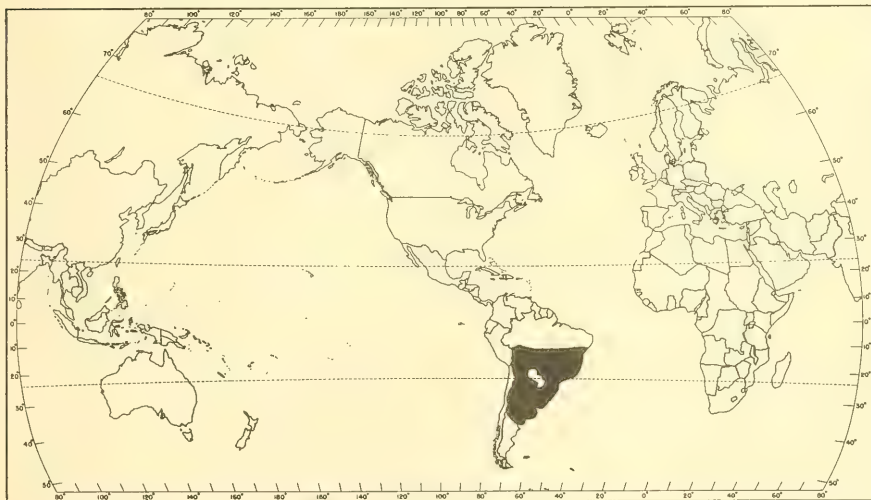
INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

A LEAF-FEEDING COCCINELLID (Epilachna paenulata (Germar))

Economic Importance: This species of Epilachna is generally considered to be the most destructive of the genus in South America. Infestations have been reported as destroying entire plantings of squash and kidney beans in Argentina and Uruguay. Though of particular importance on cucurbits in areas where it occurs, it is considered a general feeder. The adults have been intercepted several times at U. S. ports of entry with banana debris from Ecuador and with grapes and airplane baggage from Argentina.

Distribution: Occurs throughout the central part of Argentina and in Bolivia, Brazil, Uruguay and probably Ecuador.

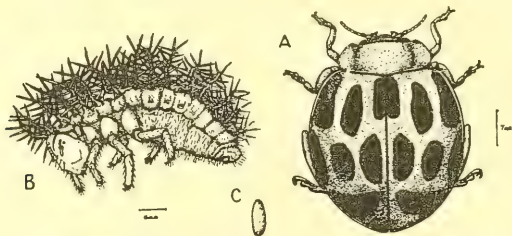
Hosts: Feeds on many hosts; most important on cucurbits and beans.



General Distribution of Epilachna paenulata

Life History and Habits: The overwintering adults emerge and mate in the spring. The eggs are laid on the underside of tender leaves of host plants in groups of 4 to 10. They hatch in about 10 days and the young larvae begin feeding voraciously. In heavy infestations, only the skeleton of the leaf is left. Larvae mature in 15 to 20 days after passing through several molts. Pupation lasts for 10 to 15 days, after which the adults emerge and begin to feed on the leaves of host plants. Adult feeding is characterized by damage to under surface of leaf, leaving the leaf margin intact. Several generations occur annually in Uruguay, but in Argentina only 2 are reported to develop. In Argentina the adults overwinter under bark of trees or any place where they can find shelter.

Description: Adults are brownish-yellow, many black spots on the elytra in a characteristic mosaic design. (See illustration). Length of adult 9-10 mm., width 6-8 mm. Eggs cylindrical in shape, one mm. in diameter, orange-yellow in color. Larva yellowish with black head, body covered with branched, dark spines. Length about 10 mm. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies.) CEIR 8(42) 10-17-58



Stages of Epilachna paenulata
A-Adult, B-Larva, C-Egg

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OCTOBER 24, 1958

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GREENBUG heavy in Garfield County, Oklahoma, with possibility of heavier than normal population in this area in spring of 1959. (p.890).

Infestation by three CORN INSECTS in Iowa, 1958. (p. 890).

SPOTTED ALFALFA APHID caused loss of last cutting of hay in Custer County, Oklahoma. (p. 891).

Marked increase in SPRUCE BUDWORM population in Idaho and outbreak continues in western Montana. (p. 894).

Apparently an upswing from normally high incidence of WHITE-PINE WEEVIL is in progress in northeastern States. (p.894).

Outbreak of LARCH SAWFLY in western Missoula County, Montana, first record in northern Rockies since 1944. (p. 895).

Widespread outbreak of ALDER FLEA BEETLE in northern Idaho and western Montana. Feeding heavily in northeastern Washington. (p. 895).

Egg laying by HORSE BOT FLY heavy in Oklahoma, Idaho and Wyoming. (p. 896).

INSECT DETECTION: New infestations of European corn borer found in Chilton and Shelby Counties, Alabama, and in Perry, Saline, Lafayette, Columbia, Union, Calhoun, Bradley and Cleveland Counties, Arkansas. (p. 889). Southwestern corn borer found for first time in Dallas, Ouachita, Calhoun, Bradley, Ashley, Chicot, Drew and Cleveland Counties, Arkansas. (p. 889). Spotted alfalfa aphid found in Wasco County, Oregon, and Asotin County, Washington. (p. 891).

INSECTS not known to occur in the United States. (p. 899).

List of some INSECTS and MITES intercepted at U. S. ports of entry in 1956. (p. 901).

WEATHER BUREAU 30-DAY OUTLOOK
MID-OCTOBER TO MID-NOVEMBER 1958

The Weather Bureau's 30-day outlook for the period from mid-October to mid-November calls for temperatures to average above seasonal normals over most of the nation, except for near to below normal east of the Appalachians, along the Gulf Coast and also in the Pacific Northwest. There are some indications of a sharp break in the prevailingly warm regime, perhaps during the first half of November, but it is too early to specify the nature of the new weather pattern. Precipitation is predicted to be subnormal over most areas, except for near to above normal in the western quarter of the country and also along the Gulf Coast.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 a half year.

WEATHER OF THE WEEK ENDING OCTOBER 20

Unseasonably warm, dry, sunny weather was ideal for harvesting operations, but increased the need for rain in north central areas and parts of the Far West and Southeast. Average temperatures for the week were as much as 15° above normal in the northern Great Plains, tapering off to about normal in the extreme northeast and along the south Atlantic coast and 3° to 6° below normal in the Rio Grande Valley. On 2 or 3 days about midweek, temperatures rose to summertime levels east of the Rockies, with maxima in the 80's and 90's even in the Canadian Border States. A high of 97° was reported at Wagner, South Dakota, on the 15th, and the highest temperatures of record for so late in the season occurred at numerous stations throughout the central and northern Great Plains. Along the California coast, where abnormally high temperatures have been unusually persistent since March, Los Angeles recorded 104° on the 16th, equaling the previous record high there for October. In the Northeast, temperatures ranged from near record lows for the time of year at the beginning of the week to summertime levels at midweek. On the 14th, minima at inland stations ranged in the middle and low 20's.

Substantial precipitation was limited to a few areas. Rains fell over the Rio Grande River Valley the first and middle of the week, with totals ranging from 1/2 inch or less in the western part of the Valley to over 8 inches at Brownsville, Texas. An eastward moving area of low pressure in the Gulf of Mexico produced light rain along the central Gulf coast on Friday the 17th and light to heavy amounts in the Southeast over the weekend. In Florida, totals ranged from 1 to 3 inches. An inch of rain fell at points in extreme northern New England during the passage of a cold front on Thursday and Friday. A cold front, with strong winds which caused damage in some areas, moved into the Northwest on the 17th producing heavy rains west of the Cascades and light amounts east of the Cascades to the Rocky Mountains. Temperatures dropped 10° to 20° and Idaho reported a few inches of snow at higher elevations. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - OKLAHOMA - More numerous in Kiowa County for this late in season than in recent years. Continued to cause marginal damage to wheat and alfalfa. (Hudson). TEXAS - Small flights of Melanoplus bilituratus in Dallam and Hartley Counties on October 9 moving southwest, low to medium in height. (Russell). Caused spotted to light damage to wheat in Deaf Smith County. (Thomas). NORTH DAKOTA - Preliminary evaluation of egg survey data for most of State indicates infestation level slightly below that recorded on adult survey. (N. D. Ins. Rpt.). WYOMING - M. bivittatus, M. bilituratus and M. femur-rubrum damaged winter wheat in Albin area of Laramie County, with up to 12 drill rows destroyed in some fields. A third-instar M. bilituratus which may be second generation, was also found. (Shockley).

EUROPEAN CORN BORER (Pyrausta nubilalis) - DELAWARE - Larvae active in stalks and ears in Sussex County with stalk breakage slightly increased over past 2-3 weeks. (Burbutis, Conrad). VIRGINIA - Heavy in corn in the Boykins area of Southampton County. (Morris, Emmons). ALABAMA - New infestations found in Chilton and Shelby Counties. Additional counties are Jefferson, Clay, Randolph and St. Clair. (Grimes). ARKANSAS - New records include Perry, Saline, Lafayette, Columbia, Union, Calhoun, Bradley and Cleveland Counties. Now reported from all but Garland, Hot Springs, Pike, Sevier, Little River and Ouachita Counties. All new infestations found in late, green corn. (Ark. Ins. Rpt.).

CORN EARWORM (Heliothis zea) - ALABAMA - Caused heavy damage to field corn in Shelby County. (Grimes). OKLAHOMA - Infested 100 percent of 1,920 corn ears checked in Nowata County. (Arbuthnot). WISCONSIN - Damage occurred on as high as 75 percent of ears in very late planted corn fields in western part of State. Fairly high numbers of moths appeared in a Dane County light trap on nights of October 15 and 16. (Wis. Coop. Sur.). UTAH - This species and sap beetles caused moderate damage to late corn in Beaver County. (Knowlton).

FALL ARMYWORM (Laphygma frugiperda) - ALABAMA - Heavy damage observed on field corn in Shelby County. (Grimes).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - ARKANSAS - New records include Dallas, Ouachita, Calhoun, Bradley, Ashley, Chicot, Drew and Cleveland Counties. Now recorded in every county in State except Mississippi County. All new infestations were in late corn still green. (Ark. Ins. Rpt.).

CHINCH BUG (Blissus leucopterus) - OKLAHOMA - Numerous on corn stalks at harvest in Payne County. Predominantly adults. (Walton).

SORGHUM MIDGE (Contarinia sorghicola) - OKLAHOMA - Averaged 20-50 percent damage to heads of late-planted grain sorghums in some fields in Nowata, Craig, Ottawa and Mayes Counties. Some adults still active. (VanCleave). Averaged 25-100 percent loss of seed in late-planted grain sorghums in Garvin County. Few found in late seed heads. (Henderson).

A SPIDER MITE (Oligonychus stickneyi) - CALIFORNIA - Heavy on milo near Holtville, Imperial County. (Cal. Coop. Rpt.).

HESSIAN FLY (Phytophaga destructor) - COLORADO - "Flaxseed" stage averaged 2 per 10 plants of volunteer wheat near Venango in Sedgwick County, 30 at Amherst and 1 at Holyoke in Phillips County. (Exp. Sta.).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - OKLAHOMA - Averaged 0.1-0.3 per sweep in some alfalfa fields in northeastern part of State. (VanCleave).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Averaged 0-2.5 per sweep in alfalfa fields in northeast but as high as 10-20 per sweep in some fields in Payne and Noble Counties. (VanCleave). Some activity in Caddo County. (Hudson). Caused loss of last cutting of hay in Custer County. (Hutton). COLORADO - Some reduction in numbers in Mesa County. Averaged 500-1000 per 100 sweeps in Loma, Mack and Fruita areas. Only traces present in Garfield, Delta and Montrose Counties. Reported for first time during season and averaged 1500 per 100 sweeps in Sedgwick and 2500 per 100 sweeps in Yuma Counties. Late season buildup might damage spring seeded alfalfa. (Exp. Sta.). OREGON - Survey disclosed presence in southeast Wasco County, 7 miles from Jefferson County line. Many infestations in Umatilla County appear serious enough to delay plant development in spring of 1959. (Hammond). WASHINGTON - Additional records on alfalfa one mile north of Asotin, Asotin County, and at Wapato and Parker, Yakima County. (Klostermeyer, Telford). UTAH - Light to moderate generally in southern and central counties. (Knowlton).

PLANT BUGS - DELAWARE - Lygus lineolaris common on late soybeans and prevalent on clover and alfalfa. Adelphocoris rapidis common on clover and present on a field of late soybeans. All in Sussex County. (Burbutis, Conrad). OKLAHOMA - L. lineolaris averaged 0.8-8.5 per sweep in some northeastern alfalfa fields. (VanCleave).

ALFALFA WEEVIL (Hypera postica) - DELAWARE - Adults averaged 3 per 10 sweeps in old stand of alfalfa in Kent County and one per 10 sweeps in clover and alfalfa in Sussex County. (Burbutis, Conrad).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ALABAMA - Heavy on alfalfa in Madison County. Many plants seriously damaged. (Grimes). OKLAHOMA - Averaged 0.6-2.5 per sweep in some northeastern alfalfa fields. (VanCleave).

RED-NECKED PEANUTWORM (Stegasta basqueella) - TEXAS - Damage apparent on every peanut plant in Frio County. Averaged 38 percent infestation of terminals. (Harding).

CHINCH BUGS - FLORIDA - Apparently declining rapidly in Broward County but remain problem in Dade County and damaged St. Augustine grass lawns. Heavy buildup noted in 2 sub-divisions in northeast Tampa area, Hillsborough County. (Fla. St. Plt. Brd., Sept. Rpt.).

GREEN JUNE BEETLE (Cotinis nitida) - NORTH CAROLINA - Infesting lawns, pastures and occasionally alfalfa fields in Haywood County. (Holloway, Rabb).

SOYBEAN CYST NEMATODE (Heterodera glycines) - Surveys conducted during September in MISSOURI, KENTUCKY, OHIO and ILLINOIS. No new finds reported during month. (PPC, Cent. Reg., Sept. Rpt.).

FRUIT INSECTS

GRAPE LEAF FOLDER (Desmia funeralis) - CALIFORNIA - Medium to heavy on 1000 acres of grape vineyards near Modesto, Stanislaus County. Large numbers found parasitized in one vineyard. (Cal. Coop. Rpt.).

GREEN PEACH APHID (Myzus persicae) - COLORADO - Migration to peach trees begun September 26 almost complete. (Exp. Sta.).

CITRUS BLACKFLY (Aleurocanthus woglumi) - MEXICO - Inspections were made during September on 222,690 citrus trees on 2,713 properties in the chemical control zones in the States of Tamaulipas, Nuevo Leon, Sonora and Baja California. Infestations found in Tamaulipas and Nuevo Leon in 472 trees on 90 properties. In States of Tamaulipas and Nuevo Leon, 15,511 citrus trees on 393 properties were treated by the National Blackfly Committee. (PPC, Mex. Reg., Sept. Rpt.).

MEXICAN FRUIT FLY (Anastrepha ludens) - MEXICO - At Tijuana, Tecate and Ensenada, Baja California, 1,113 traps were operated on 454 properties with 4,573 inspections made, all negative. Apparently fly carry-over very low. (PPC, Mex. Reg., Sept. Rpt.).

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - Heavy in walnuts near Lebec, Kern County, and medium on peaches near Jacumba, San Diego County. (Cal. Coop. Rpt.). UTAH - English walnuts 90-100 percent infested in Ogden area. Damage and maggot population below that of some recent years. (Knowlton).

BLACK SCALE (Saissetia oleae) - CALIFORNIA - Heavy on figs at Winterhaven, Imperial County. (Cal. Coop. Rpt.).

A LATANA SCALE (Aspidiotus lataniae) - CALIFORNIA - Heavy on grape near Santa Paula, Ventura County. (Cal. Coop. Rpt.).

PEAR LEAF BLISTER MITE (Eriophyes pyri) - WASHINGTON - Up to 60 adults found in individual blisters on apple foliage at Pullman, September 25 and 26. None found under bud scales. (Johansen).

Citrus Insect Situation, Lake Alfred, Florida, Second Week of October - PURPLE SCALE activity increased slightly, some further increase expected. CITRUS RED MITE activity unchanged, but slow increase expected for several weeks. CITRUS RUST MITE declined on leaves and fruit. There may be further reduction, but general trend for next month expected to be upward. (Pratt, Thompson, Johnson).

TRUCK CROP INSECTS

CABBAGE LOOPER (Trichoplusia ni) - TEXAS - Caused 30 percent damage to lettuce in areas of Deaf Smith County. (Thomas). NEW MEXICO - Caused considerable damage to lettuce fields in Dona Ana and Eddy Counties. (N. M. Coop. Rpt.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - DELAWARE - Very heavy in most fields of peppers over State. Feeding almost entirely in fruits. High infestation of borers in stems of late potatoes in one field in Kent County. (Burbutis, Conrad). VIRGINIA - Observed in pods of field peas, string bean pods, eggplant fruit, lima bean pods and tomato stalks in Boykins area, Southampton County. (Emmons).

LEAF MINERS - FLORIDA - Severe on tomato, pepper and squash plants in Broward County, tomatoes showing most damage. Heavy on tomatoes in one location of Dade County and damaging same crop in Pinellas County. (Fla. St. Plt. Brd., Sept. Rpt.).

SALT-MARSH CATERPILLAR (Estigmene acrea) - TEXAS - Attacked truck crops, shrubs and flowers in Hidalgo County. (Deer). Observed crossing highways in Robertson County. (Monk).

TOMATO HORNWORM (Heliothis zea) - DELAWARE - Present in most pepper fields in State with some Kent and Sussex County fields having rather high percentage of infestation, especially around edges. (Burbutis, Conrad). COLORADO - Egg counts decreased to 3.6 per 100 leaves on tomatoes in Prowers, Bent, Otero and Pueblo Counties, with 51 percent parasitism. (Exp. Sta.). TEXAS - Caused spotted damage to lettuce in Deaf Smith County. (Thomas).

GREEN PEACH APHID (Myzus persicae) - CALIFORNIA - Heavy on peppers near Bonita, San Diego County. (Cal. Coop. Rpt.).

SLUGS - PENNSYLVANIA - Very abundant on celery being bleached in the south central part of the State (Pepper) and injury as high as 15 percent on potatoes in low areas of the northwest (Adams).

SEED-CORN MAGGOT (Hylemya cilicrura) - OKLAHOMA - Larvae caused moderate damage to roots and stems of seedling spinach at Bixby, Tulsa County. (Walton).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - UTAH - Damaged celery in Tremonton-Elwood area of Box Elder County. (Knowlton).

CYCLAMEN MITE (Steneotarsonemus pallidus) - OREGON - Surveys in Willamette Valley disclosed 8 of 96 strawberry fields infested. A total of 11 plantings now known infested in State. Survey continues. (Capizzi).

COTTON INSECTS

BOLLWORMS (Heliothis spp. et al.) - CALIFORNIA - Light in cotton fields near Sanger, Fresno County. (Cal. Coop. Rpt.).

COTTON LEAFWORM (Alabama argillacea) - ALABAMA - Inspection of cotton fields in northern Autauga County revealed negative results of damage, however infestations continue to increase. No larvae found in Lee County area. (Grimes).

COTTON APHID (Aphis gossypii) - ALABAMA - Heavy infestations observed on cotton in Madison County. (Grimes). NEW MEXICO - Generally light with heavy but spotty infestations in southern counties. (N. M. Coop. Rpt.).

SPIDER MITES - ALABAMA - Heavy on cotton in Madison County. (Grimes).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

LARCH CASEBEARER (Coleophora laricella) - IDAHO - Heavy populations centered around St. Maries. Outbreak covers 110 square miles, with most of the spread occurring northward. Small numbers as far north as Sandpoint. (Denton). WASHINGTON - Light damage to western larch. Spread north and west to Chewelah. (Denton).

ORANGE-STRIPED OAKWORM (Anisota senatoria) - NEW JERSEY - Abundant in southern part of State. (Northeast. For. Pest Rptr., Oct. 15).

A PINE TIP MOTH (Rhyacionia sp.) - MONTANA - Localized heavy infestations in ponderosa pine understory in Carter County (Custer National Forest). (Denton).

RUSTY TUSsock MOTH (Orygia antiqua) - MONTANA - Heavy defoliation on huckleberry and other underbrush. Light feeding on subalpine fir over 1500 acres in vicinity of West Yellowstone. (Denton).

SEQUOIA PITCH MOTH (Vespamina sequoiae) - MONTANA - Active infestation has persisted over past 10 years in Glacier National Park. Attacks occur at the base of lodgepole pine, but thus far trees bear no outward sign of damage. (Denton).

A PITCH MOTH - MONTANA - Causing top kill in lodgepole pine stands in several areas of the Gallatin and the Lewis and Clark National Forests. (Denton).

SPRUCE BUDWORM (Choristoneura fumiferana) - IDAHO - An active infestation persists in grand fir over an area of 89,000 acres of State and private forests south of Lewiston. A marked increase in budworm population occurred in 1958. (Denton). MONTANA - The ten-year old outbreak continues unabated over much of the Douglas-fir forests in western portion of State. (Denton).

GYPSY MOTH (Porthetria dispar) - NEW YORK - In the suppressive area, single moths were trapped in townships of Delhi and Franklin, 5 moths in 4 traps in township of Middletown and 35 recovered in 5 traps in township of Roxbury. All these were in Delaware County. Single moths were caught in townships of Putnam Valley and Patterson in Putnam County. Both locations are in area sprayed in 1957. No moths were recovered on Long Island. In the generally infested area, 12 moths were caught in 4 traps in Unionvale township and 59 moths in 16 traps in Dover township. Most of these sites are outside or immediately inside 2 irregular areas sprayed in 1957. A single moth was recovered in Champlain township in Clinton County. NEW JERSEY - One moth was recovered near Hibernia in Rockaway township, within one-half mile of a 1956 positive site sprayed in 1957. (PPC, East. Reg., Sept. Rpt.). MICHIGAN - No moths trapped during September. Total for season was 15 in 7 traps in Lansing area. (PPC, Cent. Reg., Sept. Rpt.).

DOUGLAS-FIR BEETLE (Dendroctonus pseudotsugae) - IDAHO - Noticeable increase in number of groups of red-topped trees observed in 1958, with a considerable buildup of the beetle in 12,500 acres in St. Joe River drainage above Avery. (Denton). MONTANA - Increasing on Kootenai, Flathead and Lolo National Forests. Greatest buildup found in Flathead Valley over an area of 5000 acres. (Denton). WASHINGTON - Increased activity on Douglas-fir in northeast. Groups of 50 or more trees killed. (Denton).

MOUNTAIN PINE BEETLE (Dendroctonus monticolae) - IDAHO - Heavy infestation in the Clearwater National Forest continues to take a considerable toll of western white pine. It is expected that beetle populations will increase still further in 1959. (Denton). MONTANA - Two active infestations, totalling 1000 acres, showed a 54 percent decrease in number of newly attacked trees in 1958. (Denton). WASHINGTON - A moderate to heavy epidemic has been continuing for several years taking a considerable toll of about 1200 acres of lodgepole pine near Chewelah. (Denton).

BARK BEETLES (Dendroctonus spp.) - MONTANA - Several spot infestations of D. murrayanae near West Yellowstone. Beetles filling in at base of lodgepole pine following attacks by an undetermined pitch moth along the upper bole. D. engelmanni decreasing activity in State as a whole. A few active centers persist around logging operations in Kootenai and Flathead National Forests and in a wilderness area of Custer National Forest. (Denton).

WHITE-PINE WEEVIL (Pissodes strobi) - WEST VIRGINIA - Becoming very noticeable at scattered locations within State, with red spruce apparently equally if not more favored than white pine. Abundant in all northeastern States. Apparently an upswing from normally high incidence is in progress. (Northeast. For. Pest Rptr., Oct. 15).

FLATHEADED BORERS - CALIFORNIA - Borers, probably Anthaxia aeneogaster and Chrysophana placida infested ponderosa pine in three-year old plantation stock in the Stanislaus National Forest. It is believed these followed damage from Cylindrocopturus eatoni. (Cal. Coop. Rpt.). OREGON - Chrysobothris sp. severely damaged about 10 percent of a large juniper planting in a nursery at Sweet Home, Oct. 13. (Bock).

LARCH SAWFLY (Pristiphora erichsonii) - MONTANA - Outbreak covering several square miles of scattered western larch stands in Missoula County. This is the first record of this species in the northern Rockies since 1944. (Denton).

INTRODUCED PINE SAWFLY (Diprion similis) - MINNESOTA - Active on white pine in Brainerd area of Crow Wing County and Park Rapids area of Hubbard County. (Minn. Ins. Rpt.).

RED-HEADED PINE SAWFLY (Neodiprion lecontei) - PENNSYLVANIA - Feeding on one out of 25 pines in a 10,000 tree plantation in Armstrong County. (Drooz).

A PINE RESIN MIDGE (Retinodiplosis inopis) - CALIFORNIA - It is believed that this insect killed ponderosa twigs in the El Dorado National Forest in El Dorado County, and was followed by secondary twig beetles, Pityophthorus sp. (Cal. Coop. Rpt.).

APHIDS - IDAHO - Heavy infestation on western white pine throughout range of the pine in the State. (Denton). UTAH - Periphyllus lyropictus damagingly abundant at Logan and Ogden. (Knowlton). WASHINGTON - Fall migrants returning to winter hosts, green ash and cottonwood, in Pullman area 2-3 weeks later than during past 5 years. (Johansen). IDAHO - Eriosoma lanigerum fall migration in Parma area began second week in October (Scott), heavy fall migration in Moscow area (Portman).

A CHERMID (Pineus coloradensis) - WASHINGTON - Exact damage not yet determined. May be associated with serious loss of 2 and 3-year old needles on white pine. Damage noticed throughout range of white pines in northeastern area. (Denton).

SPRUCE SPIDER MITE (Oligonychus ununguis) - MONTANA - Outbreaks persist over much of the Douglas-fir forests treated in 1957 and 1956. No significant populations found outside treated areas. (Denton).

BALSAM WOOLLY APHID (Chermes piceae) - VERMONT - Statewide survey revealed much greater acreage and volume of balsam fir killed than anticipated. No damage or current infestations found north of Danville and Lamoille River. Tree mortality and heavy attack observed throughout remainder of State. Stem attack dominant. Could result in extensive loss of balsam fir. NEW YORK - Gradual buildup at locations in Hamilton County reported. (Northeast. For. Pest Rptr., Oct. 15)

BEECH BLIGHT APHID (Prociphilus imbricator) - PENNSYLVANIA - Heavy on beeches in an area of Pike County. One farm with 3-5 acres of dead beeches, possibly resulting from this aphid. (Drooz).

MIMOSA WEBWORM (Homadaula albizziae) - FLORIDA - Pupae collected from ornamental mimosa at Ft. Walton Beach, Okaloosa County. This is second infestation reported in State. (Fla. Coop. Sur.).

ALDER FLEA BEETLE (Altica ambiens) - IDAHO - Widespread outbreak occurring over northern portion of State. Heavy defoliation on alder and willow. (Denton). MONTANA - Widespread outbreak in western area. Heavy defoliation on alder and willow. (Denton). WASHINGTON - Heavy feeding but light damage on alder and willow throughout northeastern area. (Denton).

LOCUST BORER (Megacyllene robiniae) - ALABAMA - Three specimens collected in Lee County. (Pearson). Insect not frequently reported from Alabama.

SCALE INSECTS - MISSISSIPPI - Pseudaonidia paeoniae caused severe damage to camellia in Columbus, Lowndes County. (Hutchins). OKLAHOMA - Aspidiotus perniciosus heavy on pyracantha in Payne and Oklahoma Counties. (Howell).

INSECTS AFFECTING MAN AND ANIMALS

HORSE BOT FLY (Gasterophilus intestinalis) - OKLAHOMA - Egg laying heavy on horses in northeastern areas. (VanCleave). IDAHO - Eggs so heavy as to give dark horses a yellowish appearance on legs, belly, shoulders and flanks near Parma. (Waters). WYOMING - Judging from the numbers of eggs observed on horses, G. intestinalis is the most common of the bot flies that are a serious pest of horses on several dude ranches in the Sheridan area, Sheridan County. (Davison).

SCREW-WORM (Callitroga hominivorax) - FLORIDA - Only 11 cases reported in Pasco County for 1958. (Fla. St. Plt. Brd., Sept. Rpt.). TEXAS - Caused severe trouble to livestock in Kendall and Gillespie Counties. (Turney).

HORN FLY (Siphona irritans) - ALABAMA - Continued to cause damage on cattle in northern part of State. (Grimes). OKLAHOMA - Averaged 100-300 per untreated animal on range cattle in northeastern part of State. (VanCleave). NEW MEXICO - Moderate and annoying cattle in Union County. (N. M. Coop. Rpt.). UTAH - Annoyance to cattle greatly reduced in northern areas of State. (Knowlton).

STABLE FLY (Stomoxys calcitrans) - OKLAHOMA - Averaged 25-100 per untreated animal on range cattle in northeastern area of State. (VanCleave).

MOSQUITOES - DELAWARE - Adult Aedes sollicitans rather numerous in eastern Kent County. (Burbutis, Conrad). FLORIDA - Unusually light for September in areas of Baker and Jackson Counties and very annoying in the Monticello district of Jefferson County. Reported very heavy in Brevard County and heaviest of year in Indian River County. Populations increasing in Dade County and the Keys. (Fla. St. Plt. Brd., Sept. Rpt.). NORTH CAROLINA - A. sollicitans generally increased in some coastal areas. (Ashton).

SHEEP KED (Melophagus ovinus) - UTAH - Moderately numerous in home flocks at Meadowville, Rich County. (Knowlton).

FLEAS - OKLAHOMA - Pulex irritans and Ctenocephalides felis nuisance in and around homes in Oklahoma City, Guthrie, Perkins and Stillwater. (Bower, Howell).

BROWN DOG TICK (Rhipicephalus sanguineus) - OKLAHOMA - Heavy in dog kennels in Oklahoma City area (Bower) and serious problem in homes in Lawton, Comanche County. (Howell).

STORED-PRODUCT INSECTS

KHAPRA BEETLE (Trogoderma granarium) - MEXICO - As of September 2, five properties known to be infested in Guadalajara, Jalisco. Total cubic footage involved estimated at maximum of 6,400,000 cubic feet. Inspections in Mexicali district of Baja California negative during September. (PPC, Mex. Reg., Sept. Rpt.).

Stored-grain Pests in Texas - Oryzaephilus surinamensis, Tribolium confusum, Laemophloeus pusillus, and fungus beetles averaged 15-25 per quart of grain sample. (Garner).

BENEFICIAL INSECTS

PREDATORS - PENNSYLVANIA - Tenodera aridifolia sinensis more abundant than usual, generally. (Udine). OKLAHOMA - Hippodamia convergens averaged 0.4-1.2 per sweep in some alfalfa fields in northeastern part of State, Nabis sp. 0.8-1.5 and lacewings 0.5-1.2. (VanCleave).

MISCELLANEOUS INSECTS

JAPANESE BEETLE (Popillia japonica) - KENTUCKY - Aerial and ground treatment of 2,132 acres of private and public lands in Pike County accomplished between September 15 and 25. MINNESOTA - Trapping during season negative. MICHIGAN - Total of 241 acres soil-treated in Detroit area and 2 acres in Benton Harbor. ILLINOIS - Five additional finds, estimated at 3 acres each, found at Kankakee, Joliet, West Chicago, Streator and Morrison. (PPC, Cent. Reg., Sept. Rpt.).

BLACK VINE WEEVIL (Brachyrinus sulcatus) - PENNSYLVANIA - Entering homes in Greene County. (Udine).

BOXELDER BUG (Leptocoris trivittatus) - MARYLAND - Troubling homeowners in Prince Georges County. (U. Md., Ent. Dept.).

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - NORTH CAROLINA - Light infestation in Robeson County. (PPC).

TROPICAL FIRE ANT (Solenopsis geminata) - TEXAS - Very numerous in peanut fields and hindering harvest in Mason County. (Garrett). Mounds very numerous and causing concern to residents in Brown and Falls Counties. (Gallaway, Monk).

LIGHT TRAP COLLECTIONS

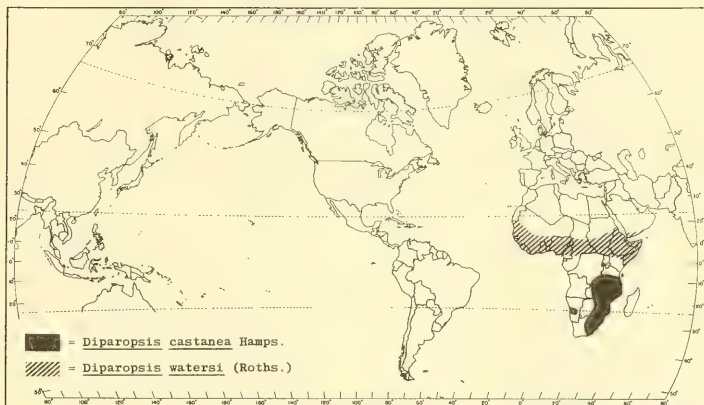
	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Ala. argil.	Helio. zea
ALABAMA							
Crossville 10/13	2						
ARKANSAS							
Fayetteville 10/2-8	1				1		38
Kelso 10/2-8	5	4			10		38
Morrilton 10/2-8	9	5					62
FLORIDA							
Monticello 10/14	1						
Quincy 10/13	4						
INDIANA (Counties)							
Orange 10/5-13	40	32	10	17	1		81
Tippecanoe 10/9-14	71	97	1	68	4		440
MISSISSIPPI							
Senatobia 10/2-9	1	3					8
*State College 10/11-17	17	6	3		44		93
*Stoneville 10/10-16	79	24	10	2	59	167	170
SOUTH CAROLINA							
Charleston 10/13-19	20	3	8		1		17
Clemson 10/12-18	11	5	1		10		1
Florence 10/12-18	69	26	9		40	107	18
TENNESSEE (Counties)							
Blount 10/7-13	1	3	8	1	8		9
Cumberland 10/7-13	16	8		3			26
Greene 10/7-13	4	1			1		6
Johnson 10/7-13	9	4	6	1	19		1
Madison 10/7-13	7	2				1	203
Maury 10/7-13	2	4	1	1			18
Robertson 10/7-13	1	7	1	1	1	1	154
TEXAS							
Waco 10/11-17	48		44	31		27,730	203

*Two traps - State College; 3 traps - Stoneville.

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

RED BOLLWORM (Diparopsis castanea Hampson)

Economic Importance: Losses caused by this pest to cotton are serious in some areas of South Africa. During outbreak years, losses have been as much as 80 percent in Nyasaland and Mozambique and 60 percent in the Union of South Africa. Damage has been so serious in some localities of Nyasaland that no cotton was picked from the first crop. The loss in yield of cotton attributed to the red bollworm was about 20 percent in the 1930-31 season in South Africa compared to an overall loss of about 33.7 percent that could be attributed to all species of bollworms. Generally speaking, red bollworm affects the cotton crop in three ways: (1) destroys full-sized bolls, (2) limits formation of mature bolls and (3) causes shifting of the time of crop production through destruction of first-crop cotton. Four species of Diparopsis are known to occur in Africa, the most important are D. castanea and D. watersi. The latter species is restricted to areas of Africa north of the equator and in Aden on the Arabian Peninsula. D. tephragamma is restricted to Angola and D. gossypioides to Tanganyika.



General Distribution of Diparopsis spp.

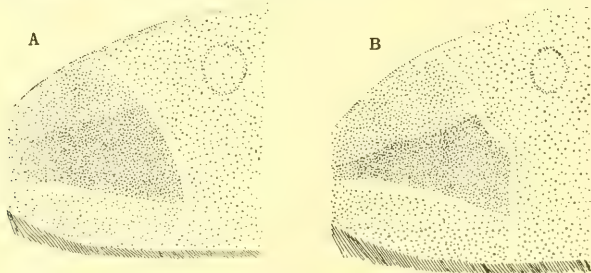
Distribution: Diparopsis castanea has been recorded in Mozambique, Union of South Africa, Transvaal, Natal, Nyasaland, Swaziland, Belgian Congo, West Africa, Northern and Southern Rhodesia, Uganda and Southern Tanganyika.

Hosts: Cultivated and wild cotton, Thespesia sp., abutilon, Cienfugosia hildebrandtii and Gossypioides kirkii.

Life History and Habits: Adults are nocturnal. They lay eggs on all parts of the host plant. Eggs hatch in 3-4 days and the young larvae migrate to squares or young bolls. In absence of fruiting bodies, larvae may bore into the stem, but this is unusual. There are 5 larval instars, the first two are usually on squares, flowers or very young bolls, later ones on more mature bolls. A larva may destroy upwards of 6 squares or one medium-sized boll. Normally larval development is complete in about 14 days, but in cooler weather this may be

doubled. Pupation occurs in the soil, the duration being extremely variable. In some instances, pupal development starts immediately and the moth emerges in 2-3 weeks, while in other instances the pupa may remain in diapause up to 32 months. There are 4 to 5 generations annually in South Africa with some larvae being found throughout the year. Oviposition usually reaches peak between late March and early May. Attacks are most noticeable during this period. In years with short seasons, damaging populations may be reduced as much as 70 percent.

Description: The head and thorax of male purplish-pink mixed with whitish and some fuscous; antennae ochreous-white, pectus ochreous-white, purplish in front; abdomen ochreous-white. Forewing purplish-pink mixed with whitish, costa irrorated with olive scales; antemedial line whitish, oblique from costa to submedian fold, with slight indentation (see figures to distinguish *D. castanea* from *D. watersi*) above fold, then erect, a dark brown band before it from costa to median nervure and crossed by a wedge-shaped olive patch in submedian interspace; an indistinct fine brownish medial line, oblique from costa to upper angle of cell, then inwardly oblique; a whitish postmedial line, excurved from costa to vein 4, then oblique, a similar subterminal line less incurved to costa, with blackish suffusion between them from vein 3 to inner margin; cilia pale olive mixed with fuscous. Forewing of female pinker and less purple, costal area not irrorated with olive, no band before costal half of antemedial line and patch below the cell paler, the area between postmedial and subterminal lines on inner area and the cilia pale olive. Wing expanse 27-31 mm. Young larva grayish-white, turning pale-pinkish to reddish after first molt. When nearly full-grown, a fairly uniform red color develops on a greenish background, head and thoracic plates chestnut; setae, setiferous tubercles and spiracles black. Anal plate grayish-white with black longitudinal line. Mature larva about 25 mm. in length. Pupa uniform light chestnut, tinted slightly greenish. A dark-green line runs dorsally to tip of abdomen. Length 14-17 mm. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies.) CEIR 8(43)10-24-58



Forewings of (A) *D. watersi* and (B) *D. castanea*



Male of *Diparopsis* sp. (Slightly Reduced)

Figures (except map): Adult from Hampson, G. F. 1908. Catalogue of the Noctuidae in the Collection of the British Museum. 709 pp., London. Forewings from Clements, A. N. 1951. Bul. Ent. Res. 42(3):491-497.

LIST OF INTERCEPTED INSECTS AND MITES, 1956

(List of Pests Recorded from July 1, 1955, through June 30, 1956, as Intercepted in, on or with Plants and Plant Products entering United States Territory.)

INTRODUCTION

This list is being issued in response to a suggestion by the Insect Survey Committee of the Entomological Society of America in order to stimulate further interest in the detection of pests not known to occur in the United States. It has been abstracted from the forty-third report of interceptions issued October, 1957, by the Plant Quarantine Division, Agricultural Research Service, U. S. Department of Agriculture. The list summarizes the records of insects and mites found in, on, or with plant products (1) imported, (2) offered for but refused entry, (3) held as ships' stores, etc., and hence not offered for entry through customs, (4) offered for entry for immediate transportation and exportation in bond, and (5) in domestic shipments between the American Virgin Islands, Hawaii and Puerto Rico and the mainland.

This abstract deals with insects and mites of known or potential plant quarantine significance that are not known to occur in the Continental United States according to all available ARS and U. S. National Museum records. In addition to those listed here, many interceptions were made of other insect pests of primary plant quarantine significance including (a) important pests of only limited distribution in the United States such as the golden nematode, pink bollworm, Mexican fruit fly, khapra beetle, etc., and (b) known economic pests such as fruit flies and others of potential economic importance that could not be determined specifically because they were taken in immature stages. The data, including some for the previous year, were largely obtained from identifications made by specialists of the Entomology Research Division and Plant Quarantine Division, supplemented by information supplied by State officials. Specialists of the Crops Research Division identified many of the host plants cited. All scientific names were reviewed by specialists in the Department and U. S. National Museum to assure conformance to the International Rules of Nomenclature. Any names that have been changed since the list was issued in October, 1957, have been corrected in this revision. Every effort has been made to give the correct origin for all collections listed, questionable cases being omitted or the origin listed as unknown.

Pest and host	County of origin	Number of interceptions	Collected in
<i>Acrolepia assectella</i> (Zell.) (Hyponomeutidae):			
<i>Allium porrum</i> (leek).....	France, Netherland, Spain.....	6.....	N. Y., Pa.
<i>Adetus mucoreus</i> Bates (Cerambycidae):			
<i>Copaifera hemitomophylla</i> ("cattivo").....	Colombia.....	1.....	Ga.
<i>Adoretus sinicus</i> Burm. (Scarabaeidae):			
Airplane.....	Hawaii, Japan, unknown.....	12.....	Hawaii
Baggage.....	Hawaii.....	2.....	Hawaii
<i>Cordylone terminalis</i> (tl.).....	do.....	1.....	Hawaii
Flowers.....	do.....	1.....	Hawaii
Orchid.....	do.....	1.....	Hawaii
Personal effects.....	Hawaii, Japan.....	3.....	Hawaii
<i>Zingiber officinale</i> (ginger).....	Hawaii.....	1.....	Hawaii
<i>Agroiconota propinqua</i> (Boh.) (Chrysomelidae):			
<i>Ananas comosus</i> (pineapple).....	Dominican Republic.....	1.....	P. R.
<i>Swietenia mahagoni</i> (mahogany).....	do.....	1.....	Fla.
<i>Alpheias conspirata</i> Hein. (Galleriidae):			
<i>Ananas comosus</i> (pineapple).....	Mexico.....	1.....	Tex.
<i>Allypodes geronimo</i> (Barnes) (Noctuidae):			
Cactus.....	Mexico.....	1.....	Ariz.
<i>Anastrepha fraterculus</i> (Wied.) (Tephritidae):			
<i>Achras zapota</i> (sapodilla).....	Venezuela.....	1.....	N. Y.
<i>Citrus paradisi</i> (grapefruit).....	Brazil.....	1.....	N. Y.
<i>Citrus sinensis</i> (orange).....	do.....	2.....	Pa.
<i>Anchastus flavovittatus</i> Cham. (Elateridae):			
Orchid.....	do.....	1.....	Tex.
<i>Anomala albopilosa</i> Hope (Scarabaeidae):			
Airplane.....	Japan.....	1.....	Hawaii
<i>Anomala cuprea</i> (Hope) (Scarabaeidae):			
Airplane.....	do.....	2.....	Hawaii
<i>Anomala pleurimargo</i> Reitt. (Scarabaeidae):			
Airplane.....	do.....	2.....	Hawaii
<i>Anomala schoenfeldti</i> Ohaus (Scarabaeidae):			
Airplane.....	do.....	1.....	Hawaii
<i>Anomala sulcatula</i> Burm. (Scarabaeidae):			
Airplane.....	do.....	1.....	Hawaii
<i>Anthonomus rectirostris</i> (L.) (Curculionidae):			
<i>Prunus nipponica</i> (takane cherry).....	Japan.....	1.....	D. C.
<i>Anthonomus ruficollis</i> Champ. (Curculionidae):			
Orchid.....	Mexico.....	1.....	N. J.
<i>Macellia inornata</i> McKenzie (Coccidae):			
<i>Coccus nucifera</i> (coconut).....	Philippines.....	2.....	Calif.*
Piper sp.....	Guam.....	1.....	Calif.*
<i>Aphthona nanyoensis</i> Chujo (Chrysomelidae):			
Airplane.....	Unknown.....	1.....	Hawaii
<i>Apiomeris F</i> (Curculionidae):			
<i>Vicia stiva</i> (vetch).....	Azores, Madeira Islands.....	2.....	Mass.
<i>Aplocnemus aerosus</i> (Schilsky) (Melyridae):			
<i>Themeda triandra</i>	Union of South Africa.....	1.....	D. C.
<i>Arascerus vieillardii</i> Montr. (Anthribidae):			
<i>Operculina tuberosa</i> (wood-rose).....	Hawaii.....	1.....	Hawaii
<i>Arctea caerulea</i> (Guen.) (Noctuidae):			
Airplane.....	Japan(?).....	1.....	Hawaii
<i>Aspidiotus hartii</i> (Ckll.) (Coccidae):			
<i>Dioscorea</i> sp. (yam).....	Anguilla, British Honduras, British West Indies, Nevis, St. Kitts, Tortola.....	7.....	N. Y., St. Thomas and St. John, Tex.
<i>Athesapeuta cyperi</i> Mshl. (Curculionidae):			
Airplane.....	Hawaii.....	1.....	Hawaii
With <i>Cyperus</i> sp. and <i>Lycopodium</i> sp.....	do.....	1.....	Hawaii
<i>Aulacaspis mangiferae</i> Newst. (Coccidae):			
<i>Mangifera indica</i> (mango).....	Nicaragua, Salvador.....	2.....	Calif.* Texas
Plant.....	Venezuela.....	1.....	Calif.*
<i>Austrotortrix postvittana</i> (Wlk.) (Tortricidae):			
<i>Malus sylvestris</i> (apple).....	New Zealand.....	1.....	N. Y.
<i>Barbara tessulatana</i> (Stdgr.) (Olethreutidae):			
<i>Cypripedium</i> sp. (cypress).....	Greece.....	1.....	N. Y.
<i>Bephrata maculicollis</i> Cam. (Eurytomidae):			
<i>Annona muricata</i> (sour sop).....	Venezuela.....	1.....	P. R.
<i>Bouhelia maroccana</i> Balachowsky (Coccidae):			
<i>Muscari comosum</i> (cipollino).....	Morocco.....	1.....	N. Y.
<i>Brachycerus albidentatus</i> Gyll. (Curculionidae):			
<i>Allium sativum</i> (garlic).....	Italy.....	1.....	Tex.
<i>Brachycerus algiricus</i> (F.) (Curculionidae):			
<i>Allium sativum</i> (garlic).....	Italy, Spain.....	5.....	N. Y., P. R.
<i>Bruchidius algiricus</i> (Allard) (Bruchidae):			
<i>Vicia faba</i> (broadbean).....	Egypt.....	1.....	Mass.
<i>Bruchidius dorsalis</i> Fahr. (Bruchidae):			
<i>Gleditsia</i> sp.....	Japan.....	1.....	Wash.
<i>Bruchidius gilvus</i> (Gyll.) (Bruchidae):			
<i>Onobrychis</i> sp.....	Turkey.....	1.....	D. C.
<i>Bruchidius incarnatus</i> (Boh.) (Bruchidae):			
<i>Vicia faba</i> (broadbean).....	Germany.....	1.....	Va.
<i>Bruchidius picipes</i> (Germ.) (Bruchidae):			
<i>Astragalus</i> sp.....	Iran.....	1.....	D. C.

Pest and host	Country of origin	Number of interceptions	Collected in
<i>Bruchophagus coluteae</i> (Boucek) (Eurytomidae):			
Colutea arborecens.....	Italy.....	1.....	N. J.
<i>Bruchophagus glycyrrhizae</i> Nik. (Eurytomidae):			
Glycyrrhiza sp.....	Iran.....	1.....	D. C.
<i>Bruchophagus mellipes</i> Gahan (Eurytomidae):			
Sesbania sesban.....	India.....	1.....	D. C.
<i>Bruchophagus onobrychidis</i> (Nik.) (Eurytomidae):			
Onobrychis viciifolia.....	Iran.....	1.....	D. C.
Onobrychis sp.....	do.....	2.....	D. C.
<i>Bruchophagus ononis</i> (Mayr) (Eurytomidae):			
Ononis pubescens.....	Israel.....	1.....	D. C.
<i>Bruchus emarginatus</i> Allard (Bruchidae):			
Pisum sativum (pea).....	Burma.....	1.....	N. Y.
Vicia ervilia (bitter vetch).....	Iran.....	1.....	D. C.
<i>Bruchus ervi</i> Froh. (Bruchidae):			
Lens culinaris (lentil).....	Italy.....	2.....	N. Y.
<i>Bruchus lentis</i> Froel. (Bruchidae):			
Lens culinaris (lentil).....	France, Italy, Lebanon, Libya, Union of South Africa, unknown.....	7.....	N. Y., Oreg., Tex.
<i>Bruchus rufipes luteicornis</i> Ill. (Bruchidae):			
Vicia angustifolia.....	Germany.....	1.....	N. J.
Vicia sativa (vetch).....	Azores, Portugal.....	2.....	Mass., N. Y.
Vicia sp.....	Portugal.....	1.....	D. C.
<i>Bruchus signaticornis</i> Gyll. (Bruchidae):			
Lens culinaris (lentil).....	Italy.....	3.....	N. Y.
<i>Bruchus tristiculus</i> Fahr. (Bruchidae):			
Vicia stiva (vetch).....	Azores.....	1.....	N. Y.
<i>Bruchus tristis</i> Boh. (Bruchidae):			
Bean.....	Greece.....	1.....	Ill.
Lathyrus cicera.....	Iran.....	1.....	D. C.
Lathyrus sativus.....	Italy.....	1.....	N. Y.
Lathyrus sp.....	do.....	1.....	N. Y.
<i>Bruchus ulicis</i> Muls. (Bruchidae):			
Lens culinaris (lentil).....	Iran.....	1.....	D. C.
Vicia sp.....	do.....	1.....	D. C.
<i>Cacoecia pronubana</i> (Hbn.) (?) (Tortricidae):			
Rosmarinus officinalis (rosemary).....	Italy.....	1.....	Mass.
<i>Callosobruchus anisii</i> (F.) (Bruchidae):			
Lens culinaris (lentil).....	Union of South Africa.....	1.....	Tex.
<i>Calyptocephala gerstaeckeri</i> Boh. (Chrysomelidae):			
Chamaedorea oblongata.....	Mexico.....	1.....	Tex.
<i>Carposina niponensis</i> Wal. (Carposinidae):			
Malus sylvestris (apple).....	Japan.....	11.....	Hawaii, Pa. Tex., Wash.
<i>Caryedon fuscus</i> (Goeze) (Bruchidae):			
Archis hypogaea (peanut).....	Cape Verde Islands.....	1.....	Mass.
Legume seed.....	Azores.....	1.....	Mass.
Tree seed.....	India.....	1.....	N. J.
<i>Cassida circumdata</i> Herbst. (Chrysomelidae):			
Airplane.....	Guam, Hawaii, unknown.....	6.....	Hawaii
<i>Cenopalpus pulcher</i> (C. & F.) (Tenuipalpidae):			
Malus sylvestris (apple).....	Spain.....	1.....	D. C.
<i>Cephalodonta callosa</i> Baly (Chrysomelidae):			
Stanhopex sp. (orchid).....	Canal Zone.....	1.....	Fla.
<i>Ceratitis capitata</i> (Wied.) (Tephritidae):			
Averrhoa carambola (carambola).....	Hawaii.....	1.....	Calif.*
Citrus aurantifolia (sweet lime).....	Azores.....	1.....	Mass.
Citrus paradisi (grapefruit).....	Israel, Italy.....	3.....	N. Y., Tex.
Citrus reticulata (Mandarin orange).....	Cape Verde Islands, Israel.....	4.....	Mass., N. Y.
Citrus sinensis (orange).....	Algeria, Azores, Brazil, Ca- nary Islands, Egypt, Greece, Israel, Italy, Leb- anon, Portugal, Spain, Union of South Africa.....	44.....	Ala., Fla., *La. Mass., N. Y., Pa., Tex., Va.
<i>Coffea</i> sp. (coffee).....	Brazil, Hawaii.....	8.....	Calif.* Hawaii, Tex.
<i>Crataegus</i> sp.....	Italy.....	1.....	N. Y.
<i>Cydonia oblonga</i> (quince).....	Greece.....	1.....	N. Y.
<i>Eriobotrya japonica</i> (loquat).....	Azores.....	1.....	Mass.
<i>Ficus carica</i> (fig).....	Island of Rhodes, Italy.....	4.....	Mass., N. Y.
Malus sylvestris (apple).....	Azores, Italy, Portugal, Spain.....	8.....	Mass., N. Y., Pa., Tex.
<i>Mespilus germanica</i> (medlar).....	Italy.....	1.....	N. Y.
<i>Opuntia humifusa</i> (pricklypear).....	do.....	6.....	Mass., N. Y.
<i>Prunus armeniaca</i> (apricot).....	Italy, Spain, unknown.....	7.....	N. Y., Va.
<i>Prunus persica</i> (peach).....	Brazil, France, Italy, Leb- anon, Portugal, Spain, unknown.....	21.....	Mass., N. Y.
<i>Prunus persica nectarina</i> (nectarine).....	France.....	1.....	N. Y.
<i>Psidium guajava</i> (guava).....	Azores, Israel.....	2.....	Mass., N. Y.
<i>Punica granatum</i> (pomegranate).....	Italy.....	1.....	N. Y.
<i>Pyrus communis</i> (pear).....	France, Libya, Portugal, Spain, unknown.....	11.....	Ill., Md., Mass., N. Y., Pa., P. R.

*State inspection

Pest and host	Country of origin	Number of interceptions	Collected in
<i>Ceratitidis capitata</i> (Wied.) (Tephritidae):			
Citrus limon(lemon).....	Spain.....	1.....	Mass.
Citrus paradisi(grapefruit).....	British East Africa.....	1.....	Mass.
Citrus sinensis(orange).....	Azores,Brazil,Israel,Italy, Palestine,Portugal, Spain.....	14.....	Mass.
Coffea sp.(coffee).....	Hawaii.....	1.....	Hawaii
Diospyros sp.(persimmon).....	Italy.....	1.....	Mass
Eugenia malaccensis(mountain apple).....	Hawaii.....	1.....	Hawaii
Malus sylvestris(apple).....	Azores(?),Portugal.....	4.....	Mass.,Pa.
Mangifera indica(mango).....	Hawaii.....	1.....	Hawaii
Opuntia humifusa(pricklypear).....	Italy.....	1.....	N. Y.
Prunus amygdalus(almond).....	Greece.....	1.....	Mass.
Prunus persica(peach).....	Italy,Spain,unknown.....	3.....	Mass.,N. Y.
Prunus persica nectarina(nectarine).....	Brazil.....	1.....	N. Y.
Psidium guajava(guava).....	Azores,Portugal, South America.....	4.....	Mass.,P. R.
Pyrus communis(pear).....	Italy.....	1.....	Mass.
Vitis sp.(grape).....	Azores.....	1.....	Mass.
<i>Cerconota anonella</i> (Sepp)(Stenomelidae):			
Annona muricata(soursop).....	Colombia.....	1.....	Ga.
<i>Chalcodermus dentiferus</i> Faust(Curculionidae):			
Ananas comosus(pineapple).....	Mexico.....	1.....	Tex.
<i>Characoma albulalis</i> Wlk.(Noctuidae):			
Airplane.....	Kwajalein(?).....	1.....	Hawaii
<i>Charidotis seminulum</i> (Boh.) (Chrysomelidae):			
Chamaedorea oblongata.....	Mexico.....	2.....	Tex.
Chamaedorea sp.....	do.....	1.....	Tex.
<i>Chelymorpha varians</i> Blanch.(Chrysomelidae):			
Vitis sp.(grape).....	Chile.....	1.....	N. Y.
<i>Chilo suppressalis</i> (Wlk.) (Crambidae):			
Oryza sativa(rice).....	Japan.....	6.....	Calif.* Hawaii,Wash.
<i>Chlorophorus annularis</i> (F.) (Cerambycidae):			
Anthurium sp.....	Hawaii.....	1.....	Hawaii
<i>Clerada apicicornis</i> Sign.(Lygaeidae):			
Chamaedorea sp.....	Mexico.....	1.....	Tex.
Vanda sp.(orchid).....	Hawaii.....	1.....	Hawaii
<i>Cnephia virgureana</i> (Treit.) (Tortricidae):			
Flowers-assorted.....	England.....	1.....	Mass.
<i>Colaspis suturalis</i> Lef.(Chrysomelidae):			
Airplane.....	Mexico.....	1.....	Tex.
<i>Colasposoma metallicus rugiceps</i> Lef.(Chrysomelidae):			
Airplane.....	Japan.....	1.....	Hawaii
<i>Cortichelus aguacatae</i> Barber(Curculionidae):			
Persea americana(avocado).....	Mexico.....	15.....	Tex.
<i>Coptotermes formosanus</i> Shiraki(Rhinotermitidae):			
Airplane.....	Japan,Philippines(?).....	2.....	Hawaii
<i>Coptotermes niger</i> Snyder(Rhinotermitidae):			
Wooden packing case.....	Nicaragua.....	6.....	La.
<i>Cosmopsaltria fuliginosa</i> (Wlk.) (Cicadidae):			
Airplane.....	Philippines.....	1.....	Hawaii
<i>Crophius dirupta</i> (Dist.) (Lygaeidae):			
Orchid.....	Mexico.....	1.....	Calif.*
<i>Cryphula apicatus</i> (Dist.) (Lygaeidae):			
Bromeliad and cycad plants.....	do.....	1.....	Ariz.
Orchid.....	British Honduras,Mexico.....	4.....	Ariz.,Tex.
<i>Cryptoblabes gnidiella</i> (Mill.) (Phycitidae):			
Citrus sinensis(orange).....	Israel,Spain(?).....	2.....	Mass.,Pa.
Diospyros sp.(persimmon).....	Italy.....	1.....	N. Y.
Punica granatum(pomegranate).....	do.....	1.....	N. Y.
<i>Cryptophlebia illepidia</i> (Stl.) (Dietheutidae):			
Macadania sp.....	Hawaii.....	4.....	Hawaii
Plant root-identified.....	do.....	1.....	Hawaii
Samanea saman(monkey pod).....	do.....	1.....	Hawaii
<i>Ctenochira aspersa</i> Champ.(Chrysomelidae):			
Chamaedorea oblongata.....	Mexico.....	1.....	Tex.
<i>Curculio elephas</i> (Gyll)(Curculionidae):			
Castanea sp.(chestnut).....	Greece,Italy,Spain.....	12.....	Ill.,N. Y.,St. Thomas and St. John.
<i>Quercus ilex</i> (holly oak).....	Spain.....	1.....	N. J.
<i>Quercus suber</i> (cork oak).....	Italy,Spain.....	2.....	N. J.
<i>Quercus</i> sp.....	Lebanon.....	2.....	N. J.,N. Y.
<i>Curculio nucum</i> L.(Curculionidae):			
Castanea sp.(chestnut).....	Italy.....	1.....	Ill.
<i>Cylas formicarius</i> (F.) spp.(Curculionidae):			
Ipomoea batatas(sweetpotato).....	Philippines,Thailand.....	2.....	D. C.,Hawaii
Ipomoea sp.....	China.....	1.....	Hawaii
<i>Cylas formicarius formicarius</i> (F.) (Curculionidae):			
Ipomoea batatas(sweetpotato).....	India,Thailand.....	2.....	Hawaii,S. C.
<i>Dactyloctenys aegyptiaca</i> Eggers(Scolytidae):			
Cupressus arizonica(Arizona cypress).....	France.....	1.....	D. C.

Pest and host	Country of origin	Number of interceptions	Collected in
<i>Dacus cucurbitae</i> Coq. (Tephritidae):			
Airplane.....	Hawaii(?) , unknown.....	2.....	Hawaii
Cucumis sativus (cucumber).....	Hawaii, Philippines.....	6.....	Calif. *
Lycopersicon esculentum (tomato).....	do.....	5.....	Calif. *
<i>Dacus cucurbitae</i> Coq. (?) (Tephritidae):			
Cucumis sativus (cucumber).....	do.....	3.....	Calif. *
<i>Dacus dorsalis</i> Hend. (Tephritidae):			
Airplane.....	Hawaii, West Pacific(?).....	2.....	Hawaii
Carica papaya (papaya).....	Hawaii, Philippines.....	2.....	Hawaii
Coffea sp. (coffee).....	Hawaii.....	13.....	Hawaii
Cordyline terminalis (ti).....	do.....	1.....	Hawaii
Diospyros sp. (persimmon).....	do.....	1.....	Hawaii
Ficus sp. (fig).....	do.....	1.....	Hawaii
Mangifera indica (mango).....	do.....	5.....	Hawaii
Psidium guajava (guava).....	do.....	1.....	Hawaii
<i>Dacus dorsalis</i> Hend. (?) (Tephritidae):			
Magifera indica (mango).....	do.....	1.....	Calif. *
Terminalia catappa (tropical almond).....	do.....	1.....	Hawaii
Thevetia peruviana.....	do.....	1.....	Hawaii
<i>Dacus oleae</i> Gmel. (Tephritidae):			
Olea europaea (olive).....	Greece, Italy, Lebanon, Portugal.....	17.....	Mass., N. Y., Va.
<i>Dacus passiflorae</i> Frogg. (?) (Tephritidae):			
Manifera indica (mango).....	Fiji.....	2.....	Hawaii
<i>Dendrocoris variegatus</i> Nelson (Pentatomidae):			
Orchid.....	Mexico.....	1.....	Ariz.
<i>Deuterocampta atramaculata</i> (Stal) (Chrysomelidae):			
Orchid.....	do.....	1.....	Tex.
<i>Diaprepes abbreviata</i> (L.) (Curculionidae):			
Delphinium sp.....	Haiti.....	1.....	Fla. *
<i>Diaprepes famelicus</i> (Ol. var.) (Curculionidae):			
Baggage.....	Bermuda.....	1.....	N. Y.
<i>Dichocrocis punctiferalis</i> (Guen.) (Pyraustidae):			
Pinus strobus (white pine).....	Japan.....	1.....	N. Y.
Pinus sp. (5-leaved pine).....	do.....	1.....	Wash.
<i>Dictyla monotropidia</i> (Stal) (Tingidae):			
Orchid.....	Mexico.....	2.....	Tex.
Tillandsia sp.....	do.....	2.....	Tex.
<i>Diocalandra taitensis</i> (Guer.) (Curculionidae):			
Baggage.....	Hawaii.....	1.....	Hawaii
Cocos nucifera (coconut).....	Guam, Hawaii.....	2.....	Hawaii, Wash.
<i>Dryocetes autographus</i> (Ratz.) (Scolytidae):			
Pinus sp. (pine).....	Sweden.....	1.....	Ala.
<i>Dysdercus rusticus</i> Stal (Pyrrhocoridae):			
Copaifera hemitomophylla.....	Colombia.....	1.....	Ga.
<i>Dyspessa ulula</i> (Bkh.) (Cossidae):			
Allium sativum (garlic).....	Italy.....	3.....	La., N. Y., P. R.
<i>Epicaerus fallax</i> Boh. (Curculionidae):			
Chamaedorea sp.....	Mexico.....	1.....	Tex.
<i>Epichorista ionephala</i> Meyr. (Tortricidae):			
Ornithogalum thyrsoides (chinkerichie).....	Union of South Africa.....	2.....	N. Y.
<i>Epilachna paenulata</i> (Germ.) (Coccinellidae):			
Musa paradisica sapientum (banana).....	Ecuador.....	1.....	Tex.
<i>Epilachna philippinensis</i> Dieke (Coccinellidae):			
Clothing.....	Guam.....	1.....	Hawaii
<i>Ereunetis flavistriata</i> Wlsm. (Tineidae):			
Ananas comosus (pineapple).....	Hawaii.....	1.....	Hawaii
Cocos nucifera (coconut).....	do.....	4.....	Hawaii
Leucaena glauca.....	do.....	1.....	Hawaii
<i>Eriophyes canestrinii</i> (Nal.) (Eriophyidae):			
Buxus sempervirens (box).....	Netherlands.....	2.....	N. J.
<i>Eutheola bidentata</i> (Burm.) (Scarabaeidae):			
Ananas comosus (pineapple).....	Bahamas.....	1.....	Tex.
<i>Eulia auraria</i> Clarke (Tortricidae):			
Prunus domestica (plum).....	Chile.....	1.....	N. Y.
<i>Euscepes postfasciatus</i> (Fairm.) (Curculionidae):			
Ipomoea batatas (sweetpotato).....	British Guiana, Grenada, Hawaii, Montserrat.....	4.....	Calif. *, N. Y., St. Croix
<i>Evergestis forficalis</i> (L.) (Pyraustidae):			
Brassica oleracea botrytis (cauliflower).....	Belgium, England.....	2.....	Tex., Va.
Brassica oleracea capitata (cabbage).....	England, Netherlands.....	2.....	Pa., Tex.
<i>Farinococcus guatemalensis</i> Ferris (Coccidae):			
Orchid.....	Mexico.....	1.....	N. J.
<i>Frankliniella cestrum</i> Mlt. (Thripidae):			
Adesmia sp.....	Chile.....	1.....	D. C.
<i>Frankliniella formosae</i> Mlt. (Thripidae):			
Buddleia sp.....	Japan.....	1.....	Hawaii
Chrysanthemum sp.....	do.....	11.....	Hawaii
Dahlia sp.....	do.....	1.....	Hawaii
Dianthus sp. (carnation).....	do.....	13.....	Hawaii
Gladiolus sp.....	do.....	3.....	Hawaii
Lilium japonicum album (white Japanese lily).....	do.....	1.....	Hawaii
Lilium sp.....	do.....	2.....	Hawaii
Rosa sp.....	do.....	1.....	Hawaii

Pest and host	Country of origin	Number of interceptions	Collected in
Frankliniella intonsa (Tryb.) (Thripidae):			
Aster sp.	Germany(?)	1	N. Y.
Calluna vulgaris (heather)	Germany, Scotland	2	Mass., N. Y.
Cyclamen sp.	Italy	1	N. Y.
Dahlia sp.	Netherlands	1	N. Y.
Gentiana sp.	Switzerland	1	N. Y.
Lathyrus odoratus (sweet pea)	Sweden, Yugoslavia	2	Ill.
Potentilla sp.	Germany, Yugoslavia	1	N. J.
Rosa sp.	do.	1	Ill.
Frankliniella schultzei (Tryb.) (Thripidae):			
Dianthus sp. (carnation)	South America	1	P. R.
Ornithogalum thyrsoides (chinkapichie)	Union of South Africa	4	N. J., N. Y.
Frankliniella sulphuræ Schmutz (Thripidae):			
Mesembryanthemum roseum	Hawaii	1	Hawaii
Philadelphus sp. (mock orange)	do.	1	Hawaii
Furcaspis oceanica Idgr. (Coccidae):			
Cocos nucifera (coconut)	Kwajalein	1	Hawaii
Galgupha quadrisignata Stal (Pentatomidae):			
Orchid	Brazil	1	Tex.
Gnaphalocrocis medialis (Guen.) (Pyraustidae):			
Gnirinoschema ocellatella (Boyd) (Gelechiidae):	Thailand	1	Hawaii
Beta vulgaris (beet)	Egypt, France, Spain	3	Pa., Tex.
Gortyna flavago (Schiff.) (Noctuidae):			
Cynara scolymus (globe artichoke)	Spain	1	Pa.
Haplothrips aculeatus (F.) (Phlaeothripidae):			
Fuchsia japonica	Japan	1	Calif.*
Rhododendron catawbiense	Netherlands	1	N. J.
Syringa vulgaris (lilac)	do.	1	N. J.
Haplothrips cottei (Vuillet) (Phlaeothripidae):			
Dianthus sp. (carnation)	France, Greece, Mexico, Portugal	4	Calif.* , Ill., N. Y.
Soil with carnation, cabbage, and lettuce plants	Portugal	1	Mass.
Heilipus lauri Boh. (Curculionidae):			
Persea americana (avocado)	Mexico	1	Tex.
Heilipus ocellatus (Oliv.) (Curculionidae):			
Packing of orchid plants	Brazil	1	Fla.
Hermes guttatus (Dallas) (Lygaeidae):			
Orchid	British Honduras	1	Tex.
Heterobostrychus brunneus (Murray) (Bostrichidae):			
Drum-made of wood and animal skin	Union of South Africa	1	Fla.*
Hylurgops palliatus (Gyll.) (Scolytidae):			
Pinus sp. (pine)	Sweden	1	Ala.
Hypoparacha rhodalis Hamp. (Chrysauidae):			
Orchid	Mexico	1	Tex.
Hypocala deflorata (F.) (Noctuidae):			
Airplane	Japan	1	Hawaii
Ischnodemus diplopterus (Dist.) (Lygaeidae):			
Prunus armeniaca (apricot)	Union of South Africa	1	N. Y.
Kaloterms lamgrens Snyder (Kalotermitidae):			
Cocos nucifera (coconut)	Hawaii	1	Hawaii
Lampides boeticus (L.) (Lycaenidae):			
Canavalia microcarpa	do.	1	Hawaii
Canavalia sp.	do.	12	Calif.* , Hawaii
Phaseolus vulgaris var. (string bean)	Japan	1	Wash.
Pisum sativum (pea)	do.	1	Wash.
Laspeyresia fabivora Meyrick (Olethreutidae):			
Phaseolus vulgaris var. (string bean)	Ecuador	1	Ala.
Leperisinus fraxini (Panz.) (Scolytidae):			
Bark	Belgium	1	S. C.
Leucaspis pusilla Loew (Coccidae):			
Pinus sp. (2-leaved pine)	Yugoslavia	1	Mass.
Leucinodes orbonalis Guen. (Pyraustidae):			
Solanum melongena (eggplant)	Nigeria	1	Ala.
Lillocercis lilii (Scop.) (Chrysomelidae):			
Lilium sp. (lily)	Italy	1	N. Y.
Livia juncorum Latr. (Psyllidae):			
Calluna vulgaris (heather)	Scotland	1	Mass.
Lygaeus guatemalanus Dist. (Lygaeidae):			
Cattleya sp. (orchid)	Venezuela	1	N. J.
Macropix fasciata (Hsiao & Sailer) (Lygaeidae):			
Alopecurus sp.	Iran	1	D. C.
Macropypium reticulare (F.) (Pentatomidae):			
Orchid	Canal Zone	1	Fla.
Manestra brassicae (L.) (Noctuidae):			
Brassica oleracea capitata (cabbage)	Netherlands	1	Ala.
Mecolaenus carvalhoi (Costa Lima) (?) (Miridae):			
Orchid	Panama	1	Fla.
Megacerus alternatus Bridw. (Bruchidae):			
Operculina tuberosa (wood-rose)	Hawaii	1	Hawaii
Megastigmus pinuspinus Parf. (Torymidae):			
Abies procera	Scotland	1	N. J.
Megastigmus rafni Hoffmeyer (Torymidae):			
Abies concolor (white fir)	Belgium	1	N. J.

Pest and host	Country of origin	Number of interceptions	Collected in
<i>Metopoplax ditomoides</i> (Costa) (Lygaeidae):			
Excelsior packing.....	Spain.....	1.....	Mass.
<i>Mettriona crucipennis</i> (Boh.) (Chrysomelidae):			
<i>Chamaedorea pumila</i> (palm).....	Mexico.....	1.....	N. Y.
Palm.....	do.....	1.....	Tex.
<i>Micrapate mexicana</i> Fisher (Bostrichidae):			
<i>Calamus</i> (?) sp.....	Mexico.....	1.....	Fla.
<i>Micrelus ericae</i> Gyll. (Curculionidae):			
<i>Calluna vulgaris</i> (heather).....	Scotland.....	4.....	Ill., Mass.
<i>Molorchus minor</i> (L.) (Cerambycidae):			
Wood-coniferous.....	Switzerland.....	1.....	Pa.
<i>Monalocorisca granulata</i> Dist. (Miridae):			
Airplane.....	Mexico.....	1.....	Tex.
<i>Myelois ceratoniae</i> (Zell.) (Phycitidae):			
<i>Citrus sinensis</i> (orange).....	Morocco.....	1.....	Pa.
<i>Punica granatum</i> (pomegranate).....	Greece, Italy.....	5.....	N. Y.
<i>Tamarindus indica</i> (tamarind).....	British West Indies.....	1.....	P. R.
<i>Nasutitermes nigriceps</i> (Hald.) (Termitidae):			
Wooden packing case.....	Nicaragua.....	5.....	La.
<i>Naupactus xanthographus</i> (Germ.) (Curculionidae):			
<i>Vitis</i> sp. (grape).....	Chile.....	1.....	N. Y.
<i>Neoleucon rubrotylus</i> Carvalho (Miridae):			
<i>Philodendron</i> sp.....	Mexico.....	1.....	Tex.
<i>Nephotettix apicalis</i> (Motsch.) (Cicadellidae):			
Airplane.....	Philippines, West Pacific.....	4.....	Hawaii
<i>Neuroctenus litigious</i> Stal (Aradidae):			
Orchid.....	Mexico.....	1.....	Tex.
<i>Neuroterus numismalis</i> (Fourc.) (Cynipidae):			
<i>Quercus</i> sp. (oak).....	England.....	1.....	Mich.
<i>Neuroterus quercus-baccarum</i> (L.) (Cynipidae):			
<i>Quercus</i> sp. (oak).....	Wales.....	1.....	Pa.
<i>Nysius coenosulus</i> Stal (Lygaeidae):			
Airplane.....	Hawaii.....	1.....	Hawaii
<i>Vanda</i> sp. (orchid).....	do.....	8.....	Hawaii
<i>Nysius terrestris</i> Usinger (Lygaeidae):			
Airplane.....	Hawaii.....	2.....	Hawaii
<i>Odontotermes wallonensis</i> (Wasm.) (Termitidae):			
<i>Dahlia</i> sp.....	India.....	1.....	N. J.
<i>Oedionychis atroguttata</i> Jac. (Chrysomelidae):			
Orchid.....	Mexico.....	1.....	Ariz.
<i>Oedionychis pavonina</i> Jac. (Chrysomelidae):			
Orchid.....	do.....	1.....	Tex.
<i>Ogdosecosta biannularis</i> (Boh.) (Chrysomelidae):			
Orchid.....	do.....	1.....	Tex.
<i>Olethreutes leucotreta</i> (Meyr.) (Olethreutidae):			
<i>Citrus paradisi</i> (grapefruit).....	Union of South Africa.....	1.....	Tex.
<i>Citrus sinensis</i> (orange).....	Mozambique, Union of South Africa.....	4.....	Md., Mass., Pa.
<i>Oligonychus perditus</i> P. & R. (Tetranychidae):			
<i>Juniperus</i> sp. (juniper).....	Formosa.....	1.....	Wash.
<i>Opgona purpuricella</i> Sw. (Lyonetidae):			
Flowers.....	Hawaii.....	1.....	Hawaii
<i>Orchidophilus peregrinator</i> Buch. (Curculionidae):			
<i>Plumeria</i> sp.....	Hawaii.....	1.....	Hawaii
<i>Orsillus depressus</i> (Wu & Hey) (Lygaeidae):			
<i>Cupressus</i> sp. (cypress).....	Iran.....	1.....	D. C.
<i>Oxyacarus bicolor</i> Fieber (Lygaeidae):			
<i>Cymbidium</i> sp. (orchid).....	Australia.....	1.....	Hawaii
<i>Gossypium</i> sp. (cottonseed).....	Guam.....	1.....	D. C.
<i>Oxydema fusiforme</i> Woll. (Curculionidae):			
Clothing.....	Hawaii.....	1.....	Hawaii
Flowers.....	do.....	2.....	Hawaii
<i>Sterculia urens</i>	do.....	1.....	Hawaii
Wrapping paper.....	do.....	1.....	Hawaii
<i>Pachybrachius neitneri</i> (Dohrn) (Lygaeidae):			
<i>Lansium domesticum</i>	Philippines.....	1.....	Hawaii
<i>Paragonatodes divergens</i> (Dist.) (Lygaeidae):			
Airplane.....	Mexico.....	1.....	Tex.
<i>Capsicum frutescens longum</i> (chili pepper).....	do.....	1.....	Tex.
<i>Pealius hibisci</i> (Kot.) (Aleyrodidae):			
<i>Gardenia augusta</i> (gardenia).....	Hawaii.....	1.....	Hawaii
<i>Pectinophora scutigera</i> (Holdaway) (Gelechiidae):			
<i>Gossypium</i> sp. (cotton; boll).....	do.....	1.....	Hawaii
<i>Perkinsiella saccharicida</i> Kirk. (Delphacidae):			
Airplane.....	Hawaii, Midway Islands (?).....	2.....	Hawaii
<i>Perkinsiella vittensis</i> Kirk. (Delphacidae):			
Airplane.....	Fiji.....	1.....	Hawaii
<i>Phelypera distigma</i> Boh. (Curculionidae):			
Bromeliad and orchid plants.....	Mexico.....	1.....	Ariz.
Orchid.....	Canal Zone.....	1.....	Fla.
<i>Phylaspis bivulnerata</i> (Boh.) (Chrysomelidae):			
<i>Selaginella</i> sp.....	Mexico.....	1.....	Tex.
<i>Phlyctinus callosus</i> Boh. (Chrysomelidae):			
<i>Vitis</i> sp. (grape).....	Union of South Africa.....	2.....	N. Y.
<i>Physonota attenuata</i> Boh. (Chrysomelidae):			
Airplane.....	Mexico.....	1.....	Tex.

Pest and host	Country of origin	Number of interceptions	Collected in
Physonota citrinella Boh. (Chrysomelidae): Orchid.....	Mexico.....	1.....	Tex.
Physonota pcticollis Boh. (Chrysomelidae): Orchid.....	do.....	1.....	Ariz.
Phytomyza rufipes Mg. (Agromyzidae): Brassica oleracea botrytis(cauliflower).....	Denmark, England, Germany, Netherlands, Norway.....	19.....	Ala., Mass., Pa., Tex.
Brassica oleracea capitata(cabbage).....	Belgium, England, Germany, Ireland, Italy, Norway.....	10.....	Pa., S. C., Tex.
Brassica rapa(turnip) Cichorium endivia(endive).....	Germany.....	1.....	Tex.
Pieris brassicae(L.) (Pieridae): Baggage.....	Belgium.....	4.....	La., N. Y., Pa.
Pinnaspis uniloba(Kuw.) (Coccidae): Camellia sp.....	Germany.....	1.....	Pa.
Plagiodera congesta Stal(Chrysomelidae): Orchid.....	Japan.....	1.....	Calif.*
Plagiodera semivittata Stal(Chrysomelidae): Orchid.....	Mexico.....	1.....	Tex.
Plagiodera thymaloides Stal(Chrysomelidae): Bromeliad.....	do.....	3.....	Tex.
Orchid.....	do.....	1.....	Tex.
Platythrips tunicatus(Hal.) (Thripidae): Calluna vulgaris(heather).....	do.....	1.....	Tex.
Plautia fimbriata(F.) (Pentatomidae): Chrysanthemum sp.....	Scotland.....	1.....	Ill.
Plusia chalcites(Esp.) (?) (Phalaenidae): Cordylane terminalis(ti) Vanda sp. (orchid).....	Australia.....	1.....	Hawaii
Polychrosis botrana(Schiff.) (?) (Olethreutidae): Vitis sp. (grape).....	Hawaii.....	1.....	Hawaii
Polytus mellerborgii(Boh.) (Curculionidae): Musa paradisiaca sapientum(banana).....	do.....	4.....	Hawaii
Praeblissus albofasciatus Barber(Lygaeidae): Orchid.....	France.....	1.....	Pa.
Pseudaonidia trilobitiformis(Green) (Coccidae): Rosa sp. (rose).....	Honduras.....	1.....	N. J.
Saraca sp.....	France.....	1.....	Pa.
Theobroma cacao(cacao).....	St. Martin.....	1.....	St. Thomas and St. John
Pseudischaspis alienus(Newst.) (Coccidae): Cattleya sp. (orchid).....	Trinidad.....	1.....	Fla.
Laelia sp. (orchid).....	Netherlands Guiana.....	1.....	N. J.
Pseudischaspis longissima(Ckll.) (Coccidae): Citrus aurantifolia(sour lime).....	British Honduras, Costa Rica.....	2.....	Hawaii, Tex.
Pseudococcus halli(Ezzai & McConnell) (Coccidae): Lansium domesticum(lansone).....	Mexico.....	1.....	Tex.
Pseudococcus matsumotoi Shiraiwa (Coccidae): Prunus sp.....	do.....	1.....	Calif.*
Pseudococcus palmarum(Ehrh.) (Coccidae): Cocos nucifera(coconut).....	Philippines.....	1.....	Wash.
Pseudococcus saipanensis Shiraiwa (Coccidae): Cocos nucifera(coconut).....	Japan.....	1.....	N. J.
Psyllodes chrysocephala L. (Chrysomelidae): Brassica rapa(turnip).....	Hawaii.....	1.....	Calif.*
Pulvinaria aurantii Ckll. (Coccidae): Citrus sp.....	Philippines.....	1.....	Pa.
Puto ulter Ferris (Coccidae): Laelia superbiens(orchid).....	Italy.....	1.....	Pa.
Orchid.....	Japan.....	1.....	D. C.
Rejectaria pharusalis(Wlk.) (Noctuidae): Orchid.....	Guatemala.....	1.....	Tex.
Rhagoletis cerasi(L.) (Tephritidae): Prunus sp. (cherry).....	do.....	1.....	Tex.
Rhagoletis cerasi(L.) (?) (Tephritidae): Prunus sp. (cherry).....	Azores, France, Israel, Italy, Portugal, Switzerland, unknown.....	36.....	Mass., Mich., N. Y., Pa.
Rhagoletis cerasi(L.) (?) (Tephritidae): Prunus sp. (cherry).....	Germany.....	1.....	Pa.
Ribua innoxia Hein. (Phycitidae): Ananas comosus(pineapple).....	Cuba.....	10.....	La., N. Y., Tex.
Schoenobius incertulas(Wlk.) (Schoenobiidae): Airplane.....	Japan.....	1.....	Hawaii
Scotinophara lurida(Burm.) (Pentatomidae): Orchid.....	Formosa.....	1.....	Wash.
Sesamia cretica Led. (Noctuidae): Sorghum vulgare technicum(broomcorn).....	Italy.....	6.....	La., Tex.
Sidemia deparvata(Btlr.) (?) (Noctuidae): Airplane.....	Japan.....	1.....	Hawaii
Sinoxylon configerum Gerst. (Bostrichidae): Wooden chair.....	Dominican Republic.....	1.....	P. R.
Sinoxylon sexdentatum(Oliv.) (Bostrichidae): Quercus sp. (oak).....	Italy.....	1.....	Va.
Spermophagus cardui(Boh.) (Bruchidae): Convolvulus sericeus.....	Egypt.....	1.....	D. C.
Spodoptera mauritia(Bdv.) (Phalaenidae): Airplane.....	Hawaii.....	1.....	Hawaii

Pest and host	Country of origin	Number of interceptions	Collected in
<i>Stenoma catenifer</i> Wlsm. (Stenomidae):			
<i>Persea americana</i> (avocado).....	Colombia, Ecuador, Guatemala, Mexico, Panama, Salvador, Venezuela	40	Ala., Calif. *, D. C., La., Md., N. Y., P. R., Tex.
<i>Stephanoderes hampei</i> Ferr. (Scolytidae):			
<i>Coffea</i> sp. (coffee).....	Brazil, Ceylon	3	Calif. *, La., D. C.
<i>Stictoptera signifera</i> (Wlk.) (Noctuidae):			
Airplane.....	Japan	1	Hawaii
<i>Sybra alternans</i> (Wied.) (Cerambycidae):			
Airplane.....	Hawaii, unknown	2	Hawaii
<i>Bauhinia monandra</i>	Hawaii	1	Hawaii
<i>Canavalia</i> sp.....	do.	2	Hawaii
<i>Cordyline terminalis</i> (ti).....	do.	2	Hawaii
<i>Operculina tuberosa</i> (wood-rose).....	do.	2	Hawaii
<i>Sterculia urens</i>	do.	1	Hawaii
<i>Taeniothrips alliorum</i> Pr. (Thripidae):			
<i>Allium cepa</i> (onion).....	Hawaii	1	Hawaii
<i>Taeniothrips ericae</i> (Hal.) (Thripidae):			
<i>Calluna vulgaris</i> (heather).....	England, Germany, Scotland, Switzerland, unknown	24	Ill., Mass., N. Y., Pa.
<i>Erica</i> sp.....	England	1	N. J.
<i>Gladiolus</i> sp.....	Mexico	1	N. Y.
<i>Taeniothrips gracilis</i> Mlt. (Thripidae):			
<i>Nymphaea odorata</i> (waterlily).....	Bermuda	1	Mass.
<i>Taeniothrips hawaiiensis</i> (Morg.) (Thripidae):			
<i>Alpinia</i> sp.....	Hawaii	1	Hawaii
<i>Chrysanthemum</i> sp.....	Japan	1	Hawaii
<i>Dianthus</i> sp. (carnation).....	Hawaii	1	Hawaii
<i>Gardenia augusta</i> (gardenia).....	do.	19	Hawaii
<i>Philadelphus</i> sp. (mock orange).....	do.	1	Hawaii
<i>Plumeria</i> sp.....	do.	2	Hawaii
<i>Rosa</i> sp. (rose).....	Japan	1	Hawaii
<i>Sesuvium portulacastrum</i> ("akulikuli").....	Hawaii	1	Hawaii
<i>Zingiber officinale</i> (ginger).....	do.	1	Hawaii
<i>Taeniothrips picipes</i> (Zett.) (Thripidae):			
<i>Centiana</i> sp. (bluebell).....	Switzerland	2	N. Y.
<i>Primula</i> sp.....	England	2	Mass., N. J.
<i>Taeniothrips vitticornis</i> (Ky.) (Thripidae):			
<i>Canavalia</i> sp.....	Hawaii	1	Hawaii
<i>Talponia batesi</i> Hein. (Olethreutidae):			
<i>Ammonia chermola</i> (cherrie).....	Guatemala, Mexico	5	Tex.
<i>Tapinaspis wesmaeli</i> (Boh.) (Chrysomelidae):			
<i>Chamaedorea oblongata</i>	Mexico	1	Tex.
<i>Tarophagus proserpina</i> (Kirk.) (Delphacidae):			
<i>Colocasia antiquorum</i> (taro).....	Hawaii	1	Hawaii
<i>Tenthoris angustimarginatus</i> Hsiao & Sailer (Miridae):			
Orchid.....	Mexico	7	Tex.
<i>Tenthoris bicolor</i> Scott (Miridae):			
Orchid.....	Guatemala, Mexico	13	Tex.
<i>Tenthoris confusus</i> Hsiao & Sailer (Miridae):			
Orchid.....	Costa Rica, Mexico	10	Calif. *, Fla., Tex.
<i>Tenthoris distinguendus</i> Hsiao & Sailer (Miridae):			
Orchid.....	Canal Zone	2	Fla.
<i>Thecia ziba</i> Hew. (Lycaenidae):			
<i>Ananas comosus</i> (pineapple).....	Mexico	1	Tex.
<i>Bromelia sylvestris</i>	do.	1	Tex.
<i>Thrips angusticeps</i> Uzel (Thripidae):			
<i>Lactuca sativa</i> (lettuce).....	Italy, Morocco	3	N. Y., Pa.
Flowers and plants-assorted.....	Italy	1	N. Y.
<i>Thrips major</i> Uzel (Thripidae):			
<i>Calluna vulgaris</i> (heather).....	Germany, Scotland	3	Ill., Mass., N. Y.
Daisy.....	Germany	1	N. Y.
<i>Dianthus</i> sp. (carnation).....	do.	1	N. Y.
Flowers-assorted.....	England	1	Mass.
<i>Potentilla</i> sp.....	Germany	1	N. J.
<i>Rosa</i> sp. (rose).....	England	2	Ill., N. Y.
<i>Trialeurodes laui</i> (Sig.) (Aleyrodidae):			
<i>Laurus nobilis</i> (Grecian laurel).....	Italy	1	N. Y.
<i>Tricentrus albomaculatus</i> Dist. (Membracidae):			
<i>Vanda</i> sp. (orchid).....	Hawaii	1	Hawaii
<i>Trionymus sacchari</i> (Ckll.) (Coccidae):			
<i>Saccharum officinarum</i> (sugarcane).....	Mexico	1	Ariz.
<i>Unaspis yanconensis</i> (Kuw.) (Coccidae):			
<i>Citrus aurantium</i> (sour orange).....	Japan	4	Calif. *
<i>Citrus grandis</i> (pummelo).....	China	1	Hawaii
<i>Citrus limon</i> (lemon).....	Japan	3	Calif. *
<i>Citrus paradisi</i> (pomelo).....	do.	1	Hawaii
<i>Citrus reticulata</i> (Mandarin orange).....	China, Japan, Philippines	36	Calif. *, Hawaii, Pa.
<i>Citrus sinensis</i> (orange).....	Japan, Philippines	23	Calif. *, Hawaii
<i>Citrus</i> sp.....	Japan	3	Hawaii
<i>Poncirus trifoliata</i> (trifoliata-orange).....	do.	1	D. C.
<i>Xyleborus semigranulosus</i> Bldfd. (Scolytidae):			
<i>Cordyline terminalis</i> (ti).....	Hawaii	1	Hawaii

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OCTOBER 31, 1958

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Cooperative

**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
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United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GRASSHOPPER survey in Minnesota shows egg pod numbers generally low over State. (p. 921).

PEA APHID population in alfalfa unusually high in southern Nebraska; may be building up in southern New Mexico. (p. 914).

SPOTTED ALFALFA APHID continued high in Republican Valley, Nebraska, and is building up rapidly in Yuma area, Arizona. (p. 914).

CODLING MOTH damage heavier than in recent years in eastern West Virginia. (p. 915).

TOMATO FRUITWORM damaging lettuce in California and New Mexico. (p. 916).

Heavy infestation of SALT-MARSH CATERPILLAR attacking crops in Rio Grande Valley, Texas. (p. 916).

EUROPEAN PINE SHOOT MOTH heavy on pines statewide in West Virginia. (p. 917).

PLANT PEST DETECTION: Spotted alfalfa aphid reported for first time in Nez Perce County, Idaho, new area of State. (p. 914). Soybean cyst nematode reported for first time from Virginia. (p. 921). Also reported from Perquimans County, North Carolina; new county record. (p. 914). White-fringed beetles found for first time in Colquitt and Tift Counties, Georgia, and Gibson, Henderson and McNairy Counties, Tennessee. (p. 914). Spruce bud scale new to Marin County, California. (p. 917). A tenebrionid (Alphitobius laevigatus) a new State record for Idaho. (p. 918). Imported fire ant reported for first time from Adams County, Mississippi. (p. 919).

PINK BOLLWORM much heavier than last year in Texas. Increase also in Oklahoma. (p. 917).

ADDITIONAL NOTES. (p. 921).

Status of IMPORTED FIRE ANT (map). (p. 922).

INSECTS not known to occur in the United States. (p. 923).

WEATHER OF THE WEEK ENDING OCTOBER 27

Several fair, sunny days and about normal temperatures over most of the Nation continued the favorable harvesting weather which has prevailed during most of October. Owing to the prolonged dry weather, rain is needed to replenish surface soil moisture in most of the Rocky Mountain States area, the Great Plains and the South. The Northeast was favored with good rains as storms converged on that area from the south and west, resulting in 4 to 5 rainy days. Weekly totals ranged from $\frac{1}{2}$ to 3 inches in Pennsylvania, $\frac{3}{4}$ to 6 inches in New York and New Jersey, and $1\frac{1}{2}$ to 5 inches in New England. Heavy snow fell in the Adirondack and Pocono Mountains of New York and Pennsylvania, respectively, and an inch in northwestern Connecticut. This week's rains brought Boston's total precipitation for this year to 56 inches, already the greatest amount there for a calendar year during 86 years of official record. The coastal storm off the Carolina coast at the end of the previous week also produced heavy rains of 2 inches or more along the middle Atlantic coast as it moved northward, but amounts tapered off to $\frac{1}{2}$ inch or less in the Appalachians.

The second storm, moving along the Canadian Border, produced beneficial precipitation in parts of North Dakota and eastern Montana. Heavy snows fell in the Big Horn Mountains and Black Hills, and high winds, with measured gusts of 85 m.p.h. at Glasgow, Montana, caused extensive damage. Damage to power and communication lines was extremely heavy in eastern Montana. One hunter lost his life in the storm and 3 others were missing. Strong winds over much of the Far West at the beginning of the period were responsible for 4 deaths and some damage in Oregon, for spreading brush fires which burned over 16,000 acres in the mountains north of Los Angeles, California, and for soil blowing in northern and some central sections of Utah. Average temperature departures from normal for the week exceeded 3° only in the far western Great Basin where they were as much as 6° below normal at a few stations, and in the northern Great Lakes region where they were 6° to 9° above normal. (Weather supplied by U. S. Weather Bureau.)

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - OKLAHOMA - Surveys revealed light to threatening populations in crop areas of western and panhandle counties with a few local heavy spots in Beaver, Cimarron and Texas Counties, and non-economic to light populations over most range areas in western and panhandle counties. (PPC, So. Reg., Sept. Rpt.). NEW MEXICO - Damaged winter wheat and barley in Curry County. (N. M. Coop. Rpt.). Dissosteira longipennis collected in Curry, Roosevelt, Lea and Colfax Counties, indicating a spread of approximately 120 miles south and 50 miles west from where it was found in 1957. (PPC, West. Reg., Sept. Rpt.).

MORMON CRICKET (Anabrus simplex) - IDAHO - Completed surveys indicated a total of 70,500 acres infested in various counties. (PPC, West. Reg., Sept. Rpt.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - VIRGINIA - Medium to heavy in corn throughout Loudoun County. (Brown). NORTH DAKOTA - Fall abundance survey completed in 6 southeastern counties shows heaviest borer infestation ever recorded in the State. The 1958 average for all districts is 71 percent with 179 borers per 100 plants. (N. D. Ins. Rpt.).

CORN EARWORM (Heliothis zea) - FLORIDA - Averaged one larva per ear on sweet corn in 15 acres inspected at Brooker, Bradford County. (Fla. Coop. Sur.). OKLAHOMA - At Bixby, Tulsa County, 100 percent of 2,400 ears checked were infested. (Arbuthnot).

ANGOUMOIS GRAIN MOTH (Sitotroga cerealella) - OKLAHOMA - Larvae heavy in corn fields at harvest in Nowata, Tulsa and Payne Counties. Adults also numerous in same fields. (Arbuthnot, Walton).

SORGHUM MIDGE (Contarinia sorghicola) - OKLAHOMA - Damaged late planted fields of grain sorghum at Yale, Payne County. (Howell).

SUGARCANE BEETLE (Euethola rugiceps) - MISSISSIPPI - Adults found abundantly over State and in light trap collections. (Hutchins).

A WHITEFLY (Aleurocybotus sp. nov.) - CALIFORNIA - Medium on milo in El Centro area, Imperial County. (Cal. Coop. Rpt.).

ARMYWORM (Pseudaletia unipuncta) - CALIFORNIA - Heavy in fields of mixed barley and vetch in the Watsonville area, Santa Cruz County. (Cal. Coop. Rpt.).

CORN LEAF APHID (Rhopalosiphum maidis) - CALIFORNIA - Adults medium on rice in Willows area, Glenn County. (Cal. Coop. Rpt.).

HESSIAN FLY (Phytophaga destructor) - WYOMING - Damage causing estimated 2 percent loss in winter wheat in northeastern part of State. (Ferrell, Spackman). Causing light damage in localized areas in southeastern part of State. (Davison).

WHITE GRUBS (Phyllophaga spp.) - OHIO - More numerous throughout the State in 1958 than for several years. (Polivka). NEW MEXICO - Probably this genus, moderate to heavy in winter wheat fields near Pleasant Hill, Curry County. Some fields about 75 percent damaged. Replanting necessary. (N. M. Coop. Rpt.).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - DELAWARE - Present on alfalfa in New Castle and Sussex Counties. (Burbutis, Conrad). CALIFORNIA - Heavy in 75 percent of alfalfa fields in Glenn County. (Lyon).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - KANSAS - Larvae found in one field each in Geary and Ottawa Counties. Infestation rates averaged less than one percent. (Matthew).

SPOTTED CUCUMBER BEETLE (*Diabrotica undecimpunctata howardi*) - DELAWARE - Present to common in most alfalfa fields throughout State. Common on soybeans in New Castle and Sussex Counties. (Burbutis, Conrad).

PEA APHID (*Macrosiphum pisi*) - DELAWARE - Prevalent to abundant on red clover in Kent County. Common on alfalfa in New Castle County and still present in some Sussex County fields. (Burbutis, Conrad). NEW MEXICO - Appears to be increasing in alfalfa fields in southern counties. Large numbers parasitized. (N. M. Coop. Rpt.). NEBRASKA - Population in alfalfa unusually high in southern portion of State. Number per 10 sweeps are: Lancaster County, 300-1000; Gage, 200-1000; Johnson, 100-300; Otoe, 200-400; Saunders, 500; Butler, 80-550; Polk, 100; York, 160; Seward, 280; Keith, 320; Red Willow, 240; and Saline, 780. (Howe, McKnight, Hill).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - WEST VIRGINIA - Fall survey of alfalfa showed negative results. (W. Va. Ins. Sur.). ARIZONA - Building up rapidly in Yuma area, but below economic threshold. Few predators present. (Roth). IDAHO - Discovered in alfalfa fields in Nez Perce County along the Snake River south of Lewiston and in fields east and southeast of the city. This is the first record in the northern part of the State. (Portman, Foote). NEVADA - Light in the Reno area, Washoe County. (Gardella, Oct. 17). UTAH - Moderately numerous to damaging in all alfalfa fields examined in Box Elder, Weber, Davis and Salt Lake Counties. (Knowlton). KANSAS - Found in nearly all alfalfa fields surveyed in 8 north central counties and in 2 central area counties. Counts ranged from 15-625 per 25 sweeps. (Matthew). NEBRASKA - Continued high in the Republican Valley. Averaged 1120 per 10 sweeps at Holbrook, Furnas County. In a previously heavily infested field in McCook area now averages 12 per 10 sweeps with lady beetles averaging 15 per 10 sweeps. Averaged 140 per 10 sweeps in the Platte Valley near Paxton, Keith County. (Hill).

CUTWORMS - CALIFORNIA - Heavy populations of *Agrotis ypsilon* and *Feltia* sp. damaged lawns in Santa Maria, Santa Barbara County. *A. ypsilon* and *F. subterranea* damaged lawns in San Bernardino, San Bernardino County, and lippia in El Centro, Imperial County. (Cal. Coop. Rpt.). UTAH - Damaged a few lawns at Riverton and Granger, Salt Lake County. (Knowlton).

A SOD WEBWORM (*Crambus bonifatellus*) - This species and cutworms seriously damaged dichondra lawns in Los Angeles, Los Angeles County. (Longfellow).

A CHINCH BUG (*Blissus leucopterus insularis*) - NORTH CAROLINA - Infested St. Augustine grass in New Hanover County during August. Det. P. Ashlock. (Scott).

A FLEAHOPPER (*Spanogonicus albofasciatus*) - NORTH CAROLINA - This species apparently caused loss of several lawns in Faison, Duplin County, during the summer of 1958. Det. P. Ashlock. (Farrier).

RHODES-GRASS SCALE (*Antonina graminis*) - TEXAS - Attacked lawns in Tarrant and Midland Counties. (Biziło, Crowder).

SOYBEAN CYST NEMATODE (*Heterodera glycines*) - NORTH CAROLINA - Two properties in Perquimans County were found infested. This is the first positive report from this county. ARKANSAS - A total of 16 infestations were found in Mississippi County, representing 884 acres, all of which were in the non-regulated area. (PPC, So. Reg., Sept. Rpt.).

WHITE-FRINGED BEETLES (*Graphognathus* spp.) - Found for the first time in Colquitt and Tift Counties, GEORGIA, and in Gibson, Henderson and McNairy Counties, TENNESSEE. Additional infested acres and extensions of infestations were reported from Florida, Alabama, North Carolina, South Carolina, Louisiana and Mississippi. (PPC, So. Reg., Sept. Rpt.).

PLANT BUGS - DELAWARE - Lygus lineolaris common on alfalfa in New Castle and Kent Counties. Abundant in most alfalfa fields and in clover in Sussex County. Common and abundant on soybeans in New Castle and Sussex Counties, respectively. Adelphocoris rapidus remained in most alfalfa fields throughout the State. (Burbutis, Conrad). UTAH - Lygus spp. present in northern alfalfa fields, numerous in one Taylorsville field in Salt Lake County. (Knowlton).

FRUIT INSECTS

BLACK PEACH APHID (Anuraphis persicae-niger) - ALABAMA - Heavy on peach trees in Covington County. Although only a few trees were inspected almost every twig had been severely injured. (Grimes).

GREEN PEACH APHID (Myzus persicae) - NEW MEXICO - Heavy on peaches and nectarines, lighter on apricot and cherry. Winged forms very numerous. (N. M. Coop. Rpt.). UTAH - Fall migrants common on peach and apricot foliage in northern counties. (Knowlton).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - WEST VIRGINIA - Appreciable damage to apple noticeable recently in eastern panhandle region. (W. Va. Ins. Sur.).

PEAR LEAF BLISTER MITE (Eriophyes pyri) - NEVADA - Moderate on pears in Lovelock, Pershing County (Snyder, Oct. 17), and light on apples in Reno, Washoe County (Bechtel, Oct. 17).

PEAR RUST MITE (Epitimerus pyri) - CALIFORNIA - Damaged Bartlett pears in Courtland area of Sacramento County. (Cal. Coop. Rpt.).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - WEST VIRGINIA - Infestation on apple in Kearneysville area, Jefferson County, lighter than in 1957. Heavy in Hampshire County with 90 forms per leaf in one orchard. (W. Va. Ins. Sur.).

CODLING MOTH (Carpocapsa pomonella) - WEST VIRGINIA - Harvest damage was 5 percent in eastern panhandle area. (W. Va. Ins. Sur.). OREGON - Unusual infestation of larvae, probably this species, appeared in walnuts in the Eugene area, Lane County. (Jones).

OBSCURE SCALE (Chrysomphalus obscurus) - MISSISSIPPI - Pecan trees damaged heavily with limbs breaking and dying at Rolling Fork, Sharkey County. (Hutchins).

MEXICAN FRUIT FLY (Anastrepha ludens) - CALIFORNIA - Trapping continued during the period with negative results. (PPC, West. Reg., Sept. Rpt.). No flies have been found on the California-Mexican border in 1958. The latest capture was August 22, 1957, in Baja California, and July 22, 1957, in San Diego County. Of the 163 flies trapped in previous years in the border area, 146 were caught in June, July and August. The total from California remains at 12 flies since the first specimen was found here. (Cal. Coop. Rpt., Oct. 17).

TRUCK CROP INSECTS

BEAN LEAF ROLLER (Urbanus proteus) - FLORIDA - Eggs and larvae averaged one per plant in 10 acres of snap beans inspected at Orange Heights, Alachua County. (Fla. Coop. Sur.).

CABBAGE LOOPER (Trichoplusia ni) - CALIFORNIA - Heavy in cauliflower in Watsonville area of Santa Cruz County. (Cal. Coop. Rpt.). NEW MEXICO - Moderate in several Dona Ana County lettuce fields. (N. M. Coop. Rpt.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - DELAWARE - Caused considerable loss to pepper fruit in State during 1958, particularly in lower Kent and Sussex Counties. Losses in some fields as high as 50 percent due to borers in the fruit, even in fields where controls were used. New borings in stems becoming common in Kent and Sussex Counties. (Burbutis, Conrad).

IMPORTED CABBAGEWORM (Pieris rapae) - ALABAMA - Caused moderate to serious damage to young cabbage in Lee County. Both immature and adult forms prevalent. (Ruffin).

SALT-MARSH CATERPILLAR (Estigmene acrea) - TEXAS - Heavy and attacking most crops and weeds in lower and middle Rio Grande Valley. (Getzin).

TOMATO FRUITWORM (Heliothis zea) - DELAWARE - Common in pepper fruit in some Kent County fields. (Burbutis, Conrad). ALABAMA - Caused considerable damage by feeding on pods of snap beans in Escambia County. (Grimes). CALIFORNIA - Heavy and damaging lettuce in Patterson area, Stanislaus County, and medium in Watsonville area, Santa Cruz County. Medium on tomatoes in San Leandro area, Alameda County. (Cal. Coop. Rpt.). NEW MEXICO - Caused considerable damage to lettuce, especially in fields being harvested in Dona Ana County. (N. M. Coop. Rpt.).

A FUNGUS BEETLE - TEXAS - Attacking sesame while stacked in the field in Dallas and Ellis Counties. (Garner).

MEXICAN BEAN BEETLE (Epilachna varivestis) - ALABAMA - Continued to cause light damage to snap beans in Escambia County. (Grimes).

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - SOUTH CAROLINA - Found in beach morning-glories in Charleston and Beaufort Counties during September. This was the first time the insect had been found this year in Charleston County and the second time in Beaufort County. (PPC, So. Reg. Rpt.).

A FALSE CHINCH BUG (Nysius sp.) - CALIFORNIA - Light on lettuce in Watsonville area, Santa Cruz County. (Cal. Coop. Rpt.).

A LEAF MINER (Liriomyza sp.) - CALIFORNIA - Heavy and damaging tomato plantings in Santa Barbara area, Santa Barbara County. (Cal. Coop. Rpt.).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - OREGON - Continued abundant in many strawberry fields in the Willamette Valley during the week of October 19. (Capizzi).

COTTON INSECTS

BOLLWORM (Heliothis sp.) - NEW MEXICO - Feeding on large green bolls in Dona Ana County cotton fields. (N. M. Coop. Rpt.).

COTTON LEAFWORM (Alabama argillacea) - ALABAMA - Larvae, pupae and adults observed in cotton in southern part of the State. Most in pupal stage at this time. (Grimes). TEXAS - Caused heavy ragging of cotton leaves in Brazos River bottoms. (Hawkins).

PINK BOLLWORM (Pectinophora gossypiella) - ARKANSAS - Infestations were found in Clark, Hempstead, Howard, Little River and Miller Counties. LOUISIANA - One specimen, the first in 4 years, was collected in Allen Parish near the Vermillion Parish line and one specimen was collected in gin trash inspections in Vermillion Parish. TEXAS - Infestation is many times heavier this year than in 1957. OKLAHOMA - Inspections in 22 southern and southwestern counties indicate an increase in infestation in several counties. FLORIDA - On Plantation Key 2 specimens were taken from 224 blooms of hibiscus plants located on the Plantation Yacht Harbor property. (PPC, So. Reg., Sept. Rpt.). NEW MEXICO - Five larvae were found at 3 gins in Dona Ana County, involving 986 bales of cotton, and one larva at a gin in Luna County, involving 193 bales. (PPC, West. Reg., Sept. Rpt.). NEVADA - None collected in light traps to date in Pahrump Valley, Nye County. (Bechtel, Zoller, Oct. 17).

COTTON APHID (Aphis gossypii) - NEW MEXICO - Heavy in cotton fields in Mesilla Valley. Honeydew causing some damage to lint. (N. M. Coop. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana) - WEST VIRGINIA - Heavy infestation of pines statewide. (W. Va. Ins. Sur.).

FALL WEBWORM (Hyphantria cunea) - WEST VIRGINIA - Very light on various trees statewide. (W. Va. Ins. Sur.).

AN OLETHREUTID (Laspeyresia bracteata) - CALIFORNIA - Causing complete destruction of red fir cone crop and considerable damage to white fir cone crop in Stonyford Forest area, Colusa County. This is first time this species has been taken on red fir. (Sandborn, USFS).

SPRUCE BUDWORM (Choristoneura fumiferana) - CALIFORNIA - Light to moderate and causing defoliation of white fir in Bidwell Creek and North Warner areas of Modoc National Forest. In previous years this area infestation has remained at a low endemic level. (Howard, USFS).

BARK BEETLES - TEXAS - Treatment of infested trees and/or stumps continued, with 3,000 acres remaining to be treated. Activity is decreasing. (Young). CALIFORNIA - Pityophthorus sp. heavy on spruce in Los Gatos, Santa Clara County. (Cal. Coop. Rpt.).

IPS BEETLES (Ips spp.) - TEXAS - Caused mortality of merchantable pines in Angelina, Polk, Trinity and Tyler Counties. (Young).

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - TEXAS - Aerial and ground observations failed to show any additional spots with brood trees. There are no known spots with active broods. (Young).

APHIDS - OKLAHOMA - Several heavy infestations on pines and arborvitae in the Oklahoma City area, Oklahoma County. (Bower). Myzocallis ulmifolii averaged 4 per leaf on Payne County elms. (Howell).

SPRUCE BUD SCALE (Physokermes piceae) - CALIFORNIA - Collected on spruce at San Rafael, Marin County, September 25. This is the first in this county. Was first collected in the State in Alameda County May 8, 1958. (Harper).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - MISSISSIPPI - Severely damaged photinia at Mathiston. (Hutchins).

BOXWOOD LEAF MINER (Monarthropalpus buxi) - WEST VIRGINIA - Boxwood 100 percent infested in a Cabell County nursery. (W. Va. Ins. Sur.).

DOGWOOD CLUB-GALL MIDGE (Mycodiplosis alternata) - TENNESSEE - Galls found on dogwood in Knox County. (Bennett).

SCALE INSECTS - MARYLAND - Unaspis euonymi heavy on euonymus at Laurel, Prince Georges County. (U. Md., Ent. Dept.). MISSISSIPPI - Several reports of serious infestations of Fiorinia theae over the State. (Hutchins).

MIMOSA WEBWORM (Homadaula albizziae) - FLORIDA - Investigation of infestation on mimosa trees at Ft. Walton, Okaloosa County, revealed that the city, approximately 2 square miles, was generally infested. No live specimens were found. Same symptoms were observed on one property in Pensacola, Escambia County. (Bradgon, Albritton, Oct. 16).

NEVADA BUCK MOTH (Hemileuca nevadensis) - OKLAHOMA - Heavy adult population active around clumps of shinary oak in southeastern Ellis County. (VanCleave, Frazier).

A CHERMID (Phylloxera sp.) - OHIO - Stunted and distorted growing tips of pin oaks in Wooster, Wayne County. Det. L. M. Russell. (Neiswander).

INSECTS AFFECTING MAN AND ANIMALS

SCREW-WORM (Callitroga hominivorax) - NEVADA - Additional larvae collected from dogs at Fallon, Churchill County, and Las Vegas, Clark County. (Bechtel, Oct. 17). ALABAMA - During past month members of the Screw-worm Eradication Group have reported collecting sterile egg masses of this species from animals in Autauga, Montgomery and Elmore Counties, however only a few such cases have been reported. Positive specimens are still being found in these counties. (Grimes).

SCREW-WORMS - NEW MEXICO - Remained active in herds in Grant County. (N. M. Coop. Rpt.).

HORN FLY (Siphona irritans) - OKLAHOMA - Averaged 100-500 per untreated animal on range cattle in northwestern part of State. (VanCleave).

SALT-MARSH MOSQUITO (Aedes sollicitans) - DELAWARE - Remained common in eastern sections of Kent and Sussex Counties. (Burbutis, Conrad).

NORTH CAROLINA - Adults biting at the rate of 20-30 per minute along the entire coastal area. (Ashton).

AN EYE GNAT (Hippelates collusor) - CALIFORNIA - Continues to be a nuisance in the Borrego Valley of San Diego County, the El Toro area of Orange County and the Coachella Valley of Riverside County. (Mulla).

A TICK (Ornithodoros coriaceus) - CALIFORNIA - Many hunters and hikers being bitten in the Santa Susana and Sespe Creek areas of Ventura County and the Cuyama Valley of Santa Barbara County. (Cal. Coop. Rpt.).

STORED-PRODUCT INSECTS

A TENEBRIONID (Alphitobius laevigatus) - IDAHO - Infestation in pea screenings in seed warehouse in Twin Falls, Twin Falls County. Apparently new State record. (Gibson).

Stored-grain Insects in Alabama - Survey of a warehouse in Mobile County revealed a heavy infestation of immature stages of Anthrenus scrophulariae and Attagenus piceus in grain refuse. An extremely heavy infestation of Lasioderma serricorne was also found, as well as a moderate infestation of Oryzaephilus surinamensis and Tribolium confusum. (Grimes, Seibels, Barry).

A FUNGUS BEETLE - TEXAS - Caused considerable damage to stored-grain in San Patricio and Aransas Counties. (Co. Agents).

BENEFICIAL INSECTS

A SPOTTED ALFALFA APHID PARASITE (Trioxys utilis) - NEVADA - Cocoons found in two of three fields examined. This represents the first recovery of this parasite in the State. (Puttler, Oct. 17).

A CHALCID (Dibrachys cavus) - IDAHO - Reared from a collection of Haplotinea ditella. (See CEIR 7(12):214). This apparently constitutes a new host record for this common species. (Barr).

A LADY BEETLE (Olla abdominalis) - OKLAHOMA - Averaged 1-2 per 10 leaves on elms in Stillwater area, Payne County. (Howell).

MISCELLANEOUS INSECTS

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - MISSISSIPPI - Found in Adams County for the first time, September 29. (Hutchins).

SOUTHERN FIRE ANT (Solenopsis xyloni) - MISSISSIPPI - Being sent in for identification from several areas of State due to increased interest in fire ant program. (Hutchins, Oct. 3).

ELM LEAF BEETLE (Galerucella xanthomelaena) - OKLAHOMA - Adults numerous in some homes in the Stillwater area, Payne County. (Howell).

OLD-HOUSE BORER (Hylotrupes bajulus) - VIRGINIA - Damaging a building in Loudoun County. (Brown)

VEGETABLE WEEVIL (Listroderes costirostris obliquus) - TEXAS - Large numbers attracted to lights in Gillespie County. (Turney).

A WEEVIL (Eudiagogus pulcher) - CALIFORNIA - Adults heavy on sesbania foliage in Blythe area, Riverside County. (Cal. Coop. Rpt.).

A TERMITE (Zootermopsis angusticollis) - OREGON - Reported infesting several dwellings in the Salem area, Marion and Polk Counties. Some winged forms present. (Capizzi).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Ala. argil.	Helio. zea
FLORIDA							
Gainesville 10/21	4						
Quincy 10/20	3						2
INDIANA(Counties)							
Orange 10/14-17	5	17		12			103
Tippecanoe 10/15-22	138	193	10	62	4		425
KANSAS							
Garden City 9/29-10/3, 6-12,14-15,18-19	21	13					190
Hays 10/6-8,13-16	35	43					277
Manhattan 10/16	26	7			9		216
LOUISIANA							
Baton Rouge 10/10-23	64	67	42	5	206	1429	167
MISSISSIPPI							
*State College 10/17-24	20	12	6		17		126
*Stoneville 10/17-24	43	17	8	1	30	56	135
NEBRASKA							
Alliance 9/26-10/5	70	3		8			46
Concord 9/27-10/5	35	36	2	15			1159
Kearney 9/29-10/2	2	2					67
North Platte 10/3-9	1539	676	8	167	97		667
Scotts Bluff 10/7-13	267	37		99			64
SOUTH CAROLINA							
Clemson 10/18-24	4	16	2		1	1	3
Charleston 10/6-12, 20-26	20	19	4	2	13	2	21
Florence 10/19-25	37	23	3	1	42	170	27
TENNESSEE(Counties)							
Blount 10/14-20	2	7	1				14
Cumberland 10/14-20	9	11					32
Greene 10/14-20	12	3	2	1			9
Johnson 10/14-20	2	1	3	1	8		21
Madison 10/14-20	6	4	11	3		2	59
Maury 10/14-20	8	7	12		10		11
Robertson 10/14-20	6	16	4		1		128
TEXAS							
Waco 10/18-24	89		25	39		5288	160

*Two traps - State College; 3 traps - Stoneville.

ADDITIONAL NOTES

MINNESOTA - The 1958 grasshopper survey shows Melanoplus femur-rubrum by far the most dominant species in the State; however, M. bivittatus and M. differentialis egg pods were found at a number of west central and southwest locations. Generally, egg pod numbers were very low over the greater area of the State. In the west central and southwest districts a number of fields with threatening to very severe egg infestations were found, but fields with high egg counts are very scattered, indicating that the infestation will, in all probability, be quite spotty in 1959. The number of egg predators found was very low in all districts surveyed. (PPC-State Coop.).

Soybean Cyst Nematode Reported from Virginia - The following information has been received from C. R. Willey, Director, Division of Plant Industry, Virginia Department of Agriculture and Immigration, Richmond: October 27, 1958

"TO-STATE PLANT PEST CONTROL AND QUARANTINE OFFICIALS

SUBJECT-SOYBEAN CYST NEMATODE

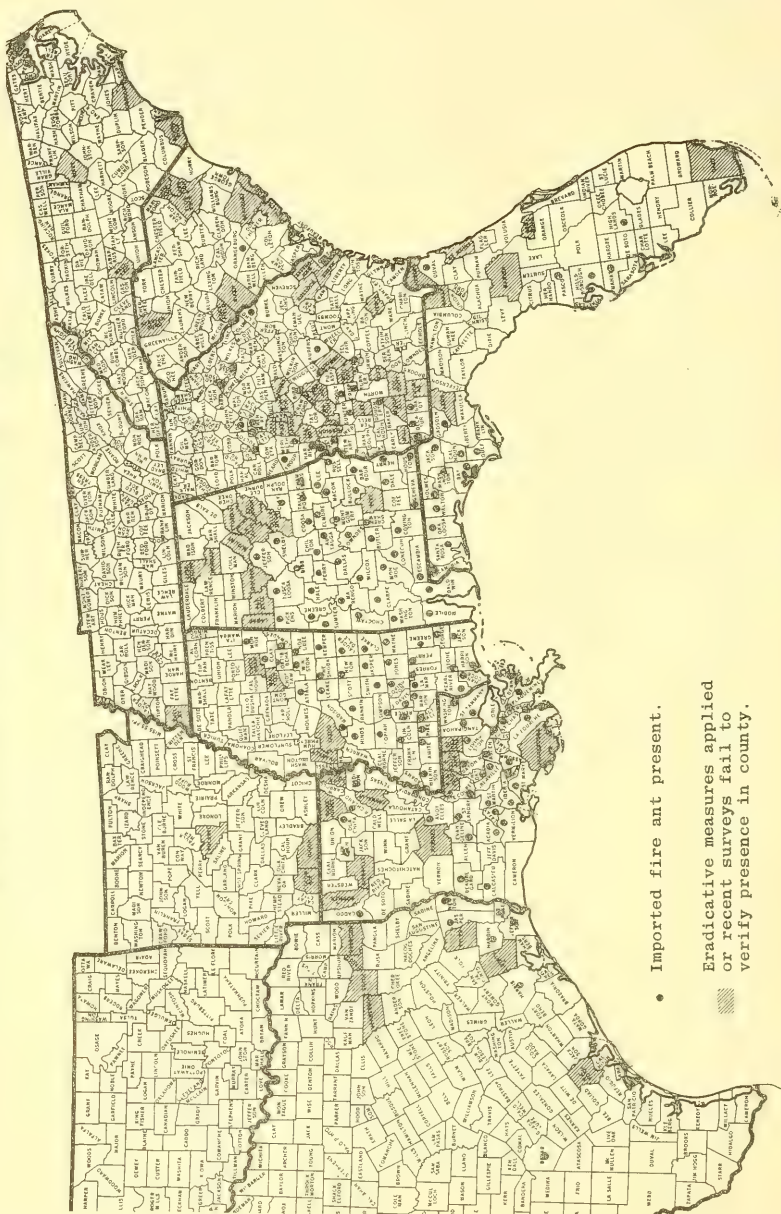
"The soybean cyst nematode (Heterodera glycines Ichinohe) has been confirmed by U. S. D. A. nematologists from soil samples from two farms in Nansemond County, Virginia.

"Over 1,250 soil samples from 29 other heavy producing counties have been processed and found negative.

"Other samples are being taken and processed, and you will be kept informed of any further developments.

"At present no hazardous commodities are being moved from the farms, or the county involved."

STATUS OF IMPORTED FIRE ANT



• Imported fire ant present.

Eradicative measures applied
or recent surveys fail to
verify presence in county.



Prepared in Plant Pest Control Division,
Agricultural Research Service, USDA,
September 30, 1958

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

CABBAGE-STEM FLEA BEETLE (Psylliodes chrysocephala (L.))

Economic Importance: Larvae of this chrysomelid are very injurious to cruciferous plants in several areas of Europe, particularly to turnips, rape, cauliflower and cabbage. They were responsible for the complete destruction of terminals of overwintered crops in the spring of 1944, 1945 and 1946 in Switzerland. The insect is a serious pest of turnips and rape in Germany and partly responsible for the decline of rape cultivation in Holland. The adults are not considered injurious in England, but sometimes completely destroy fields of winter rape and sugar beets in Germany. This pest was first found in North America during 1952 near St. Johns, Newfoundland, but has not been reported since that date. Larvae of P. chrysocephala are frequently intercepted at U. S. ports of entry.

Hosts: Cultivated and wild crucifers are principal hosts. Also attacks sugar beet, flax, vetch, soybeans and Mathiola incana.



General Distribution of Psylliodes chrysocephala

Distribution: Occurs throughout Europe and in Newfoundland, Canada. Interceptions have been reported from North African sources which indicate this species is probably present in that area also.

Life History and Habits: Overwintering adults become active during the early spring in England, later in some other countries. Females deposit over 1,000 eggs, 400 to 500 of which are laid after overwintering. Larvae arising from eggs deposited by overwintering adults pupate in April or May in England and give rise to the second brood which passes the winter. Hibernation may occur either in the egg or larval stages. Damage in England is largely confined to larval tunnelling in the stems and midribs of cauliflowers; occasionally the stalks are hollowed out, appearing blackish. In Germany, young first-instar larvae usually enter the leaf-stalk from the upper surface. Second and third-instar larvae enter any side. The mines are tortuous, consisting of a central tunnel along the stem with one or more branches at right-angles. Molting occurs close



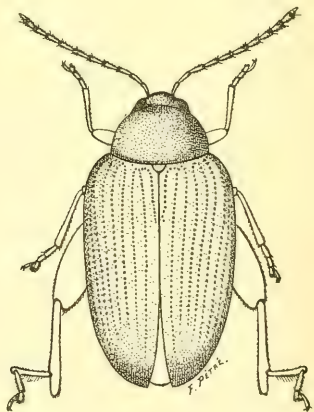
Larvae of P. chrysocephala
in Midrib of Cauliflower Leaf



Leg of P. chrysocephala

to the exit holes near the walls of the stalk. Larvae may leave one stalk and enter another in search for fresh food, leaving characteristic trails on the surface of the plants. Pupation normally occurs in the soil, but may take place in the stalk. Winter is the most important factor in limiting the population.

Description: The adult shape is oval, rather long and metallic greenish-blue. Head reddish; antennae long, lighter at base, 10-jointed. Thorax rounded, rather broad, very finely punctate; elytra with regular rows of fine punctures. Legs yellowish-brown to red with posterior femora and tibiae darker. Length 3-5 mm. Larva creamy white; head, pronotal shield and ninth abdominal tergite brown, abdomen with three transverse dorsal row of hairs; length 8 mm. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies.) CEIR 8(44) 10-31-58



Adult of P. chrysocephala

Figures (except map): Adult from Balachowsky, A. and Mesnil, L. 1936. Les Insectes Nuisibles aux Plantes Cultivees. Vol. 2, pp. 1141-1921. Paris. Leg from Jablonowski, J. 1906. A Czukorrepa Allati Ellensegei. 288 pp. Budapest. Larval damage from Smith, K. M. 1948. A Textbook of Agricultural Entomology. 289 pp. Cambridge.

VOL. 8 No. 45

NOVEMBER 7, 1958

Cooperative
ECONOMIC INSECT
REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

SPOTTED ALFALFA APHID of concern on young alfalfa in Oklahoma. (p. 928).

IMPORTED CABBAGEWORM increased to outbreak proportions on Eastern Shore of Virginia. (p. 929).

WEEVILS damaged pines in Pennsylvania. (p. 931).

INSECT DETECTION: Southwestern corn borer found for first time in Mississippi County, Arkansas. (p. 927). Smaller European elm bark beetle new to Alameda County, California. (p. 931). Beech scale collected in Pike County, Pennsylvania, first State record. (p. 931). A mealybug (Geococcus coffeae) collected for the first time in Orange County, Florida, constitutes a new United States record. (p. 931). Giant hornet collected for first time in Shelby, Knox, Johnson and Anderson Counties, Tennessee. (p. 932).

CORRECTION. (p. 932).

SUMMARY OF INSECT CONDITIONS - ALASKA - 1957 (p. 933), 1958 (p. 934).

INSECTS not known to occur in the United States. (p. 935).

WEATHER BUREAU 30-DAY OUTLOOK

NOVEMBER 1958

The Weather Bureau's 30-day outlook for November calls for temperatures to average below seasonal normals in the East, the South and the southern Rocky Mountain area. Above normal averages are predicted for the northern half of the country from the Great Lakes westward to the Pacific Coast and also in the far Southwest. In areas not specified near normal temperatures are in prospect. Precipitation is expected to exceed normal in New England and also in the Southwest. Near normal amounts are anticipated along the east and west coasts, in the northern Rocky Mountain States and in the East Gulf region. In the remainder of the nation precipitation should be subnormal.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 a half year.

WEATHER OF THE WEEK ENDING NOVEMBER 3

Cooler and drier air from central Canada pushed into the Nation the first part of the week and was the major weather factor for the week. Sunny days prevailed in the upper Great Lakes and northern Plains. Below normal temperatures were experienced except from the upper Great Lakes to the eastern slopes of the Rockies in Montana and from southeastern Arizona through the Pacific Coastal States. Little or no precipitation fell from Oklahoma northeastward to the upper Great Lakes and also from eastern Montana southwestward to southern California and southwestern Arizona. Many sections of Oklahoma have been dry and without sufficient rain for 7 weeks. Freezing temperatures were reported from the Canadian Border through most of New England, the Appalachians, the lower Ohio Valley, westward to the lower Rockies and the Sierra and Cascade Ranges. Near zero readings occurred at high elevations of the Rockies. The growing season was brought to a close in New Mexico. A low pressure area centered over southern New England spread moisture inland from the north Atlantic coast. Some snow fell each day at the higher points of New England and the northern Adirondacks. It was not until Thursday that the precipitation which had dampened much of the Northeast during the preceding week, faded from the scene and sunshine helped to boost daytime temperatures. In the South precipitation accompanied the development of a low pressure system over the Gulf of Mexico. On Wednesday, the rain at El Paso, Texas, raised the total there since January 1 to nearly 17 inches, breaking the record for moisture yielded between January and October, unshaken since 1881. The disturbance over the Gulf slowly progressed north-eastward, allowing the rains to diminish over Texas while increasing over Florida. This broke the spell of fine fall weather in the central and south-eastern parts of the country.

On Monday the 27th patches of low clouds and fog hovered along portions of the north Pacific coastline in the early morning followed by sunshine; elsewhere, sunshine was hindered by only partial cloudiness over much of the region west of the Rockies. This generally continued through Thursday. On Friday a weather front marked the advance of Pacific moisture across the Far Northwest, cloudiness across the Cascades and rain into western Washington, Oregon and the upper coast of California during the day. Late Friday, strong winds with gusts of 40 to 45 m.p.h., associated with another low pressure development in eastern Canada, swept across New York State. The cold air concentrated to the

WEATHER continued on page 932.

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - CALIFORNIA - Averaged 7-10 per square yard on rangeland and Russian-thistle until week ending October 31, when great numbers were observed dying in the west side of the San Joaquin Valley. (Cal. Coop. Rpt.). UTAH - Numerous about Yost, Box Elder County. (Knowlton).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - WISCONSIN - Fall survey showed marked decrease for 1958 as compared with 1957. The State average dropped to 15 larvae per 100 plants as compared with 36 in 1957. East central counties had highest infestations, being the only area showing an increase over the 1957 population. (Wis. Coop. Sur.).

SOUTHWESTERN CORN BORER (*Zeadiatraea grandiosella*) - ARKANSAS - Found for the first time in Mississippi County. All counties in the State are now infested with this species, which was first recorded in Sebastian and Franklin Counties in 1950. Subsequent new county records were as follows: 2 counties in 1951; 8 counties in 1952; 5 in 1953; 5 in 1954; 8 in 1955; 5 in 1956; 20 in 1957; and 20 in 1958. This spread has been most rapid in the heaviest corn producing areas. (Ark. Ins. Rpt., Oct. 25).

SORGHUM WEBWORM (*Celama sorghiella*) - ARKANSAS - Found in green heads of sorghum or suckers in field of mature sorghum in Crawford County, with up to more than 100 very small to half-grown larvae per head. (Odglen, Oct. 25).

CORN LEAF APHID (*Rhopalosiphum maidis*) - OKLAHOMA - Averaged 0-100 per linear foot of drill row in fields of fall-seeded barley in 11 central and north central counties. Infestations spotty within individual fields. (VanCleave). TEXAS - Found in several fields in panhandle counties surveyed for greenbug, although heavier on barley than wheat. (Daniels).

FALL ARMYWORM (*Laphygma frugiperda*) - GEORGIA - Heavy on oats in Spalding County, October 23. (Tippins). TEXAS - Heavy on wheat in Guadalupe County. (Turnery). Medium and attacking oats and barley in Hunt, Delta and Kaufman Counties. (Davis).

WHITE GRUBS - OKLAHOMA - Caused some damage to wheat in fields near Frederick, Tillman County (Hatfield) and severe damage to spreading junipers in an Oklahoma City nursery (Bower). Populations light in pastures in Custer County. (Hudson).

A WIREWORM - OKLAHOMA - Severely damaged 50-acre field of fall-seeded wheat near Tonkawa, Kay County, necessitating reseeding. (Henderson).

ENGLISH GRAIN APHID (*Macrosiphum granarium*) - DELAWARE - Common on winter rye cover crop in New Castle County. (Burbutis, Conrad).

GREENBUG (*Toxoptera graminum*) - TEXAS - Survey conducted October 20-24 in 19 panhandle counties showed this species present in numbers less than one per foot in Deaf Smith, Castro, Parmer, Randall, Swisher, Briscoe, Floyd and Hale Counties. However, colonies were present in these counties on the larger wheat clumps. (Daniels.). Also found in Ochiltree, Hansford and Sherman Counties but were much lighter than in counties mentioned above, being very difficult to locate. (Chada).

BROWN WHEAT MITE (*Petrobia latens*) - TEXAS - Average of 20-30 per foot noted in a continuous wheat field 5 miles north of Wellington, Collingsworth County. (Chada).

A NOCTUID (Probably Scotogramma trifolii) - WASHINGTON - Caused moderate damage to alfalfa in Asotin County. (Telford).

PEA APHID (Macrosiphum pisi) - DELAWARE - Common to prevalent on most alfalfa fields throughout the State. (Burbutis, Conrad). UTAH - Generally moderate in alfalfa fields in Salt Lake, Weber, Davis, Box Elder and Cache Counties. (Knowlton).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Averaged as high as 250 per sweep in some central and north central fields of young alfalfa. Considerably lighter in older alfalfa fields in same area. Controls applied to many fields of young alfalfa. (VanCleave). Averaged 15-18 per 10 sweeps in some alfalfa fields near Davidson, Tillman County. (Hatfield). UTAH - Light on alfalfa in Cache and Box Elder Counties, heavier in southern counties. (Knowlton). WASHINGTON - New light infestation on alfalfa discovered at Rogersburg, Asotin County. (Telford). ILLINOIS - Averaged 40 per 100 sweeps at Waterloo, Monroe County, and 14 per 100 sweeps at Pickneyville, Perry County. (Ill. Ins. Rpt.).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - DELAWARE - Common in alfalfa throughout the State and on late soybeans in Sussex County. (Burbutis, Conrad). OKLAHOMA - Averaged 0-2 per sweep in some central and north central alfalfa fields. (VanCleave).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - OKLAHOMA - Averaged 0-0.6 per sweep in some central and north central alfalfa fields (VanCleave) and 3.5-4 per sweep in alfalfa fields near Davidson, Tillman County. (Hatfield).

A TORTRICID (Sparganothis sulphurana) - VIRGINIA - Very light on soybeans in Westmoreland and other eastern counties during first half of Septembeer. Det. H. W. Capps. (Morris, Oct. 25).

GRANULATE CUTWORM (Feltia subterranea) - CALIFORNIA - Caused heavy damage to dichondra lawns in San Diego, San Diego County. (Cal. Coop. Rpt.).

A BILLBUG - OREGON - Reported in CEIR 8(41):863, has been determined as Calendra venatus confluens by R. E. Warner. (Dickason).

FRUIT INSECTS

BEET ARMYWORM (Laphygma exigua) - CALIFORNIA - Caused medium damage to citrus seedlings in Fillmore area, Ventura County. (Cal. Coop. Rpt.).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - OREGON - Surveys completed for 1958 showed 347 moths trapped on 100 properties in the Willamette Valley and none trapped on 50 properties in eastern part of State and none on 90 properties in the south. (Larson).

GRAPE LEAF FOLDER (Desmia funeralis) - CALIFORNIA - Medium and damaging grape plantings in Kelseyville area, Lake County. (Cal. Coop. Rpt.).

BLACK-MARGINED APHID (Monellia costalis) - OKLAHOMA - Averaged 25-30 per 10 leaflets on Payne County pecans. (Bieberdorf). CALIFORNIA - Heavy on pecan trees in the Blythe area, Riverside County. (Cal. Coop. Rpt.).

FILBERTWORM (Melissopus latiferreanus) - OREGON - Larvae collected from chestnuts at Salem, October 14. Det. H. W. Capps. (Every).

HICKORY SHUCKWORM (Laspeyresia caryana) - TEXAS - Attacked pecans in Brazos County, with as many as 5 larvae per nut. (Randolph).

WALNUT HUSK FLY (Rhagoletis completa) - OREGON - Completed trapping surveys in western localities reveal no flies present. (Larson).

A WALNUT HUSK FLY (Rhagoletis suavis) - PENNSYLVANIA - Infested 15 percent of English walnuts examined in Snyder County. Pupation 90 percent. (Gesell, Oct. 25).

Citrus Insect Situation, Lake Alfred, Florida, Fourth Week of October - PURPLE SCALE activity increased, with further increase expected in next 2-3 weeks. FLORIDA RED SCALE activity also increased and will continue high through November. Hatching near a peak. CITRUS RED MITE showed a slight increase in activity, with further increase expected. A considerable further increase in CITRUS RUST MITE activity is expected. (Pratt, Thompson, Johnson).

TRUCK CROP INSECTS

CABBAGE LOOPER (Trichoplusia ni) - CALIFORNIA - Medium on cucumbers in Encanto area, San Diego County, and larvae light on artichoke buds in Watsonville area, Santa Cruz County. (Cal. Coop. Rpt.).

CABBAGE WEBWORM (Hellula rogatalis) - CALIFORNIA - Medium and damaged turnip plantings in Riverside area, Riverside County. (Cal. Coop. Rpt.).

CROSS-STRIPED CABBAGEWORM (Evergestis rimosalis) - MARYLAND - Moderate to abundant on cabbage at Fairland, Montgomery County, during September. (U. Md., Ent. Dept.).

IMPORTED CABBAGEWORM (Pieris rapae) - DELAWARE - Common on kale in Kent County and prevalent on cabbage in Sussex County with fresh feeding conspicuous. (Burbutis, Conrad). VIRGINIA - Increased to outbreak proportions on Eastern Shore cole crops where control measures were not followed. (Hofmaster).

DIAMONDBACK MOTH (Plutella maculipennis) - VIRGINIA - Developed to outbreak proportions on cole crops where controls were not followed on the Eastern Shore. (Hofmaster).

EUROPEAN CORN BORER (Pyrausta nubilalis) - VIRGINIA - Damaged about 25 percent of pepper crop maturing before October 7 at Painter, with similar infestations reported elsewhere on the Eastern Shore. Generally, infestation in 1958 was one of highest on record for Eastern Shore. Potatoes, sweet corn, field corn, peppers and occasionally snap beans were attacked. This pest caused more damage to sweet corn in this area in 1958 than the corn earworm. (Hofmaster).

FALL ARMYWORM (Laphygma frugiperda) - VIRGINIA - Caused some damage to snap beans on Eastern Shore recently. (Hofmaster).

TOMATO FRUITWORM (Heliothis zea) - ALABAMA - Remained prevalent on some crops in the central portion of the State, being taken from okra during the past week. (Grimes).

GREEN PEACH APHID (Myzus persicae) - VIRGINIA - Very numerous in some pepper fields on Eastern Shore, requiring treatment. (Hofmaster). CALIFORNIA - Caused medium damage to artichokes in Watsonville area, Santa Cruz County. (Cal. Coop. Rpt.).

MELON APHID (Aphis gossypii) - VIRGINIA - Heavy infestations have occurred on cucurbits on the Eastern Shore during the last several weeks. (Hofmaster).

GREEN STINK BUG (Acrosternum hilare) - TEXAS - Light to medium on sesame in Delta County. (Davis).

TARNISHED PLANT BUG (Lygus lineolaris) - DELAWARE - Abundant on turnips and carrots in Kent County. (Burbutis, Conrad).

COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - ALABAMA - Large number in squares of young cotton in Lee County, but activity greatly reduced, probably due to cool weather. (Grimes).

BOLLWORMS (Heliothis spp.) - ALABAMA - Large numbers of eggs observed on young cotton in Lee County. Unusually heavy infestation of larvae for this late in season. (Grimes).

CABBAGE LOOPER (Trichoplusia ni) - CALIFORNIA - Medium and attacked cotton fields in Calipatria area, Imperial County. (Cal. Coop. Rpt.).

COTTON LEAFWORM (Alabama argillacea) - ARKANSAS - Defoliated small field of cotton on University Experiment Farm at Fayetteville, which had not been treated all season. Due to lateness in season no treatment was applied. Feeding on small bolls became rather common after leaves and squares were consumed. (Ark. Ins. Rpt., Oct. 25).

SALT-MARSH CATERPILLAR (Estigmene acrea) - CALIFORNIA - Medium populations continued to attack cotton plantings in Westmoreland area of Imperial County. (Cal. Coop. Rpt.).

Bugs on Cotton in California - Medium to heavy populations of bugs on cotton at Cross Roads, San Bernardino County, included Euryophthalmus convivus and Chlorochroa sayi. (Cal. Coop. Rpt.).

COTTON APHID (Aphis gossypii) - ALABAMA - Honeydew causing recudtion in quality of cotton being obtained from areas of Autauga County. (Rawson).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana) - WISCONSIN - Many dead larvae observed in southeastern part of State. Some apparently killed by unidentified parasite. (Wis. Coop. Sur.).

PINE WEBWORM (Tetralopha robustella) - PENNSYLVANIA - Infested one-third of 3-year old Scotch pine seedlings examined in Franklin County, with some killed. (Udine, Oct. 25).

A TORTRICID (Sparganothis sulfurana) - PENNSYLVANIA - Reared from web collected from pitch pine in Perry County August 26. Det. J. F. G. Clarke. (Drooz).

IPS BEETLES (Ips spp.) - ALABAMA - I. calligraphus, I. grandicollis and I. avulsus in scarce numbers in cut-over timbers in Lee County, with I. calligraphus the more abundant. (Guyton).

RED TURPENTINE BEETLE (Dendroctonus valens) - PENNSYLVANIA - Killed several white pines in Bedford County. (Drooz, Oct. 25).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - CALIFORNIA - Heavy and caused damage to elms in Alameda. This is a first record for Alameda County. (Cal. Coop. Rpt.).

WEEVILS - PENNSYLVANIA - Hylobius pales and Pissodes approximatus easily collected under Scotch, white, red and Banks pines in Blair County, with severe damage to many trees. (Udine, Oct. 25). CALIFORNIA - Heavy populations of Pityophthorus sp. caused twig damage to pines in San Jose, Santa Clara County. (Cal. Coop. Rpt.).

APHIDS - VIRGINIA - Cinara strobil and Pineus strobil general but light on white pines in Blacksburg area of Montgomery County. (Morris, Fenne, Tinga).

AZALEA LACE BUG (Stephanitis pyrioides) - MARYLAND - Injury to azaleas conspicuous at Chevy Chase, Montgomery County. (U. Md., Ent. Dept.).

BEECH SCALE (Cryptococcus fagi) - PENNSYLVANIA - Collected from beech in Pike County, September 8, for first State record. Det. H. Morrison. (Drooz).

TEA SCALE (Fiorinia theae) - ALABAMA - Extremely heavy on camellias in Lee County. (Grimes).

A MEALYBUG (Geococcus coffeae) - FLORIDA - Collected on philodendron and dieffenbachia at Apopka, Orange County, September 9. Det. H. Morrison. These constitute new U. S. records. (VanPelt, Denmark).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - NORTH CAROLINA - Aedes dupreei and Psorophora ciliata biting in Onslow County and A. vexans in Hyde and Pamlico Counties. Worst infestations of Aedes sollicitans ever observed along coastal areas, with 63 to over 100 adults landing per minute at temperatures near 70 degrees. Conditions expected to degenerate more with over 30,000 acres returning to brackish flora due to hurricane and coastal storms in 1956. (Ashton).

SCREW-WORM (Callitroga hominivorax) - LOUISIANA - From September 25 to October 28 there have been 9 authenticated reports in the State, with a total of 11 animals infested. Four reports came from Caddo Parish and one each from Concordia, Claiborne, Webster and Tensas Parishes. One case in Bossier Parish, October 28. (Spink and Screw-worm Erad. Prog.).

HORN FLY (Siphona irritans) - OKLAHOMA - Averaged 30-1000 per head of treated and untreated mature cattle in Texas County. (Flora).

A HORSE BOT FLY (Gasterophilus sp.) - OKLAHOMA - Egg laying medium to heavy on horses in central and north central areas of State. (VanCleave).

PUSS CATERPILLAR (Megalopyge opercularis) - LOUISIANA - Probably this species much more numerous in 1958 than during past several years, with several reports of persons being severely stung by these caterpillars. At least one person was hospitalized. (Spink).

EAR TICK (Otobius megnini) - OKLAHOMA - Averaged 0-34 per ear on 167 head of yearling cattle in Texas County, 0-70 in Canadian County. (Flora).

STORED-PRODUCT INSECTS

Stored-grain Insects in Texas - Heavy infestations of Sitophilus oryza, Sitotroga cerealella, Tribolium confusum, Laemophloeus pusillus, Oryzaephilus surinamensis and fungus beetles were found in 5,000 bushels of stored grain sorghum in Guadalupe County. (Turney).

BENEFICIAL INSECTS

PREDATORS - OKLAHOMA - Hippodamia convergens averaged 0.4-1 per sweep in some central and north central alfalfa fields, Nabis sp. 0.2-1.5 and lacewings 0.4-1.5. (VanCleave). TEXAS - Lady beetles were found in many fields of 19 panhandle counties surveyed for greenbug. (Daniels).

MISCELLANEOUS INSECTS

OLD-HOUSE BORER (Hylotrupes bajalus) - PENNSYLVANIA - Caused severe damage to a small building in Bedford County. (Drooz, Oct. 25).

BLACK CARPENTER ANT (Camponotus herculeanus pennsylvanicus) - NORTH CAROLINA - Swarming in homes in Nash and Wake Counties. (Wray).

GIANT HORNET (Vespa crabro germana) - TENNESSEE - Reported from Shelby, Knox, Johnson and Anderson Counties as new county records. (Mullett).

AN EARTHWORM MITE (Fuscuropoda agitans) - NORTH CAROLINA - Infestation in worm beds in Franklin County. (Farrier).

CORRECTION

CEIR 8(43):893 - TOMATO HORNWORM should be changed to read TOMATO FRUITWORM.

WEATHER OF THE WEEK - Continued

north of the Great Lakes impeded the northerly spread of rain into the northeast on Saturday. The disturbance that earlier in the week was over the Gulf of Mexico, moved across Georgia and continued up the Atlantic coast, producing cloudy, rainy weather in the Northeast over the weekend. Rain turned to snow at higher elevations with snowfall up to 9 inches near Altoona, Pennsylvania. Elsewhere in the Nation, with few exceptions, fair skies were the dominant feature supported by a high pressure system centered over Texas and northern Utah. In the Pacific Northwest, heavy clouds gave precipitation south to northern California and inland to the west slopes of the northern Rockies. (Summary supplied by U. S. Weather Bureau.)

SUMMARY OF INSECT CONDITIONS - 1957

ALASKA

Prepared by Richard H. Washburn

Forage Crop Insects: MEADOW SPITTLEBUG (Philaenus leucophthalmus) was numerous in the Juneau, Ketchikan and Sitka areas in the southeastern part of the Territory. A caterpillar resembling SOYBEAN POD BORER (Grapholitha glycinivorella) heavily infested lupine seed pods.

Small Fruit Insects: TWO-SPOTTED SPIDER MITE (Tetranychus telarius) was serious on strawberries. STRAWBERRY ROOT WEEVILS damaged strawberries in the Anchorage area and MEADOW SPITTLEBUG was numerous on raspberries and strawberries in southeastern sections.

Vegetable Insects: TURNIP MAGGOT (Hylemya floralis) was severe throughout the growing season in turnips, radishes, cauliflower, broccoli and cabbage in all areas. SEED-CORN MAGGOT (H. cilicrura) occurred only in the Matanuska Valley area and ONION MAGGOT (H. antiqua) in green onions near Palmer. CUTWORMS were serious on Gravina Island near Ketchikan in the southeast and were lightest in years in other areas. A THRIPS (Taeniothrips orionis) severely damaged cabbage and lettuce on the Kenai Peninsula. WIREWORMS (Ctenicera spp.) damaged potatoes in the Tanana Valley and limited areas of the Matanuska Valley. CABBAGE APHID (Brevicoryne brassicae) was imported on cabbage plants from the States and severely injured cabbage in the Tanana Valley. BEAN APHID (Aphis fabae) was numerous on beans. A LEAFHOPPER (Empoasca filamenta) was numerous on potatoes in river bank areas near Palmer.

Ornamental Insects: A SPEAR-MARKED BLACK MOTH (Eulype hastata) was very numerous, rolling birch leaves over a large area near Fairbanks. A BIRCH APHID (Euceraphis sp.) and other APHIDS heavily infested birch and cottonwood over the interior of the Territory. Columbine, delphinium and calendula were also heavily infested. A SPRUCE GALL APHID (Chermes sp.) was numerous on white spruce in the Tanana Valley. GLADIOLUS THRIPS (Taeniothrips simplex) damaged gladiolus in all areas. An unidentified MITE was numerous on white spruce in the Anchorage area.

Greenhouse Insects: A GREENHOUSE WHITEFLY (Trialeurodes sp.) was common in greenhouses in the Tanana and Matanuska Valleys on fuchsia. APHIDS were severe on peppers, eggplant and occasionally on cucumbers. TWO-SPOTTED SPIDER MITE (Tetranychus telarius) became established in many greenhouses in Alaska. THRIPS consumed enough cucumber pollen to interfere with pollination.

Livestock Insects: MOSQUITOES (Culiseta spp. and Aedes spp.) annoyed dairy cattle in pastures, as did BLACK FLIES (Simulium spp.) and SNIPE FLIES. A LITTLE RED LOUSE was troublesome on calves. POULTRY MITES, especially Dermanyssus spp., were serious on flocks near Palmer.

Household Insects: CLOVER MITE (Bryobia praetiosa complex) was a nuisance in farm homes in the Matanuska Valley as well as homes near Anchorage. BROWN-BANDED ROACH (Supella supellectilium) was imported with household goods from the States. GERMAN ROACH (Blattella germanica) remained the commonest species in homes and buildings. VINEGAR FLIES (Drosophila spp.) were numerous enough to be annoying for the first time in several years. SILVERFISH (Lepisma saccharina) and FIREBRAT (Thermobia domestica) were numerous in old buildings using steam heat.

SUMMARY OF INSECT CONDITIONS - 1958

ALASKA

Prepared by Richard H. Washburn

Forage Crop Insects: MEADOW SPITTLEBUG (Philaenus leucophthalmus) was numerous in the southeast portion of the Territory. RED-BACKED CUTWORM (Euxoa ochrogaster) severely damaged several hundred acres of grain near Palmer. CATERPILLARS infested lupine seed pods and oxytropus pods. Unidentified DIPTEROUS larvae damaged red clover heads in the Matanuska Valley. An APHID (Hyalopterus atriplicis), a transmitter of the yellow dwarf viruses group, heavily infested lambsquarters in the interior for the second successive year. COLLEMBOLA and LEAFHOPPERS heavily infested a grass nursery at a Matanuska farm.

Small Fruit Insects: STRAWBERRY ROOT WEEVIL (Brachyrhinus ovatus) severely damaged a strawberry patch in Anchorage. This weevil was probably introduced from the States with the plants. APHIDS were numerous on everbearing strawberries near Palmer and BLACK ARMY CUTWORM (Actebia fennica) severely damaged strawberries and rhubarb in the Knik and Soldotna areas. A WEEVIL (Lepidophorus lineaticollis) damaged strawberry fruits near Wasilla.

Vegetable Insects: Cutworms were the most destructive in several years, seriously damaging all garden vegetables except potatoes. The main species involved were RED-BACKED CUTWORM (Euxoa ochrogaster) and BLACK ARMY CUTWORM (Actebia fennica). TURNIP MAGGOT (Hylemya floralis) was serious in most cruciferous crops and SEED-CORN MAGGOT (H. cilicrura) was active in increased incidence of black-leg of potatoes in the Matanuska Valley. WIREWORMS were not as severe in potatoes as in 1957. A LEAFHOPPER (Empoasca filamenta) was not as numerous on potatoes as in 1957 though still present in the Palmer area.

Ornamental Insects: A BIRCH APHID (Euceraphis betulae) heavily infested white birch throughout Alaska, being especially severe in specimen trees. A STINK BUG (Elasmotethus interstinctus) was very numerous on cottonwood.

Greenhouse Insects: CUTWORMS defoliated peppers and burrowed in tomatoes in greenhouses in the Palmer area. A WHITEFLY (Trialeurodes sp.) was common on fuchsia in a florist greenhouse near Palmer. APHIDS were common in most greenhouses, especially on egg plant and peppers.

Household Insects: VESPID WASPS were extremely numerous and annoying, with many nests in homes and outbuildings. CLOTHES MOTHS (Tinea sp. and Tineola sp.) were common in homes. CLOVER MITE (Bryobia praetiosa complex) was numerous in homes in the Anchorage area.

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

CITRUS LEAF MINER (Phyllocnistis citrella Stainton)

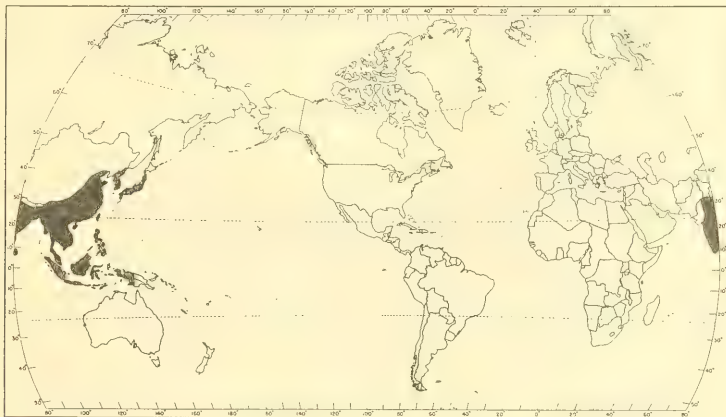
Economic Importance: Citrus plants are sometimes seriously hampered by attacks of Phyllocnistis citrella in citrus-growing areas of Asia, especially the young tender shoots and leaves of plantation plants and young nursery stock. Injury is caused by larval mining which results in the killing of large amounts of tissue. When the mines become excessive in number, growth of the plant stops, though an infestation seldom causes the death of the tree. The mines have been reported as points of citrus canker infection in some areas where the disease occurs.



Distribution: Occurs throughout tropical Asia; being recorded in India, Ceylon, East Pakistan, Burma, Thailand, Malaya, Indonesia, Indochina, China, Korea, Japan, Formosa, Netherlands New Guinea, Philippines, Loochoo Ids., Mariana Ids. and western Caroline Ids. Records in the literature from Cape Town, South Africa and the Northern Territory of Australia seem of doubtful accuracy since subsequent confirmatory records have not been found.

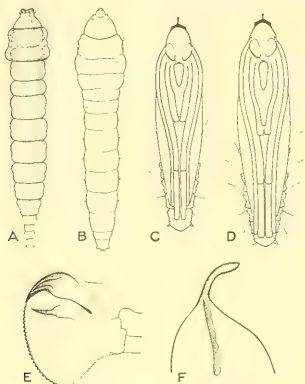
Characteristic Mines in Leaf

Hosts: Citrus is the principal host. Also attacks baelfruit, curryleaffree and Arabian jasmine in India and kumquat in Japan.



General Distribution of Citrus Leaf Miner

Life History and Habits: The eggs are laid singly, 2 or 3 per leaf, on either surface but usually on the underside near the midrib. During the summer, hatching takes place in about 3 days. The young larvae enter the leaf tissue and feed as leaf miners without coming to the surface during their development which takes 5 or 6 days. Typical injury consists of irregularly twisted galleries containing a brownish excrement. The epidermis over the galleries appears as a silvery film. Most of the mines are found on the upper surface of the leaf in the more humid and tropical areas. When larval feeding ceases, the epidermis of the leaf and opposing tissues are forced apart by the rolling and arching action of the larva thus forming a pupal chamber. The portion of the



Larval and Pupal Forms of *Phyllocnistis citrella* - (A) Mature Larva, (B) Prepupa, (C) Male Pupa, (D) Female Pupa, (E) Mandible of Larva, (F) Pupal Head Prong

are similar in form, though the head and are proportionately larger. The pupa is pale-yellow inside the cocoon, and has a stout curved prong on its head and heavy spines on the abdomen which are used in emergence. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies and the U. S. N. M.) CEIR 8(45) 11-7-58

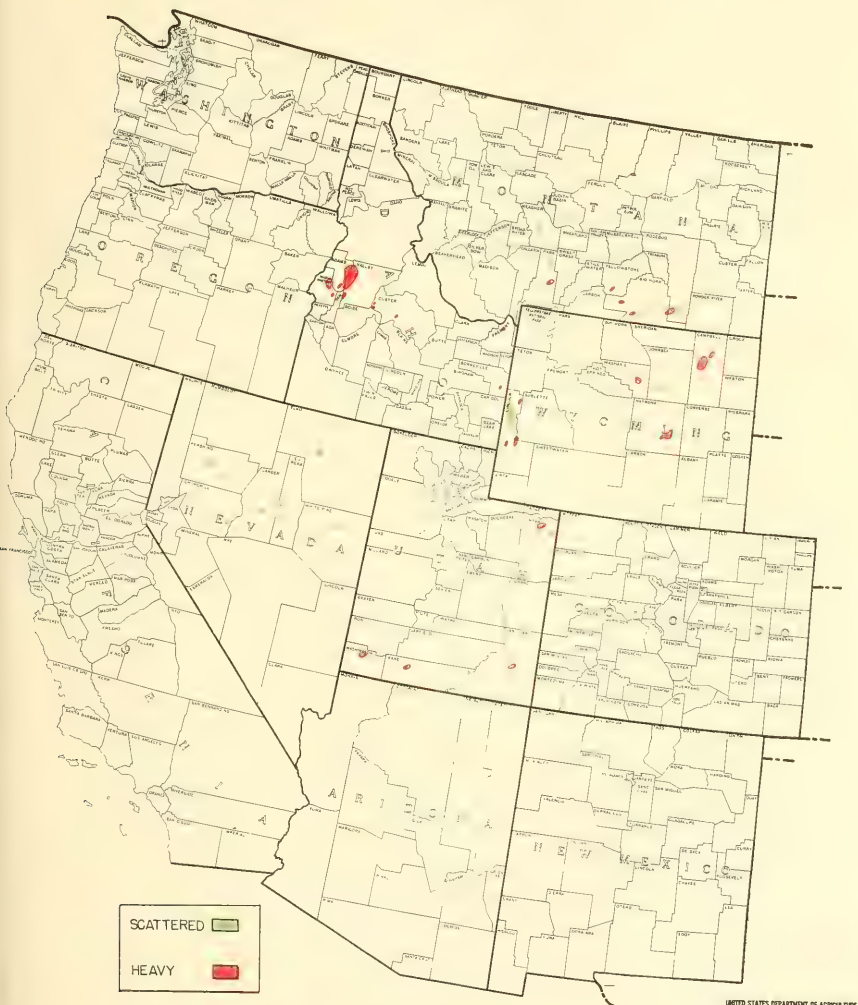
cocoon visible has a distinct orange cast. Emergence takes place in about 6 days, usually during the early morning hours. The adults are nocturnal and seldom seen. Populations are lowest from December to February and greatest from March to May and September to November in the Punjab of India. This species passes the winter solely as an adult. Approximately 6 generations a year are produced in southern Japan.

Description: The adults are very small, silvery-white with pale-yellow markings, and a black spot at the tip of each forewing. They are seldom noticed with the naked eye. Eggs are about 0.27 mm. in length, flat, and without sculpturing or covering. The mature larva is cylindrical, dull-yellow in color. The larval head is small. It has a pair of antennae terminating in two rounded lobes and rudimentary mouth parts with the exception of the spinnarets. The earlier larval stages are pale greenish-yellow and have modified mothparts for sap-feeding. The later larval stages



Adult Female of *Phyllocnistis citrella* (Enlarged 25 times)

MORMON CRICKET ADULT SURVEY - FALL 1958



UNITED STATES DEPARTMENT OF AGRICULTURE
 AGRICULTURAL RESEARCH SERVICE
 PLANT PEST CONTROL BRANCH
 WESTERN REGION

UNITED STATES DEPARTMENT OF AGRICULTURE
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ECONOMIC INSECT
REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

CORN LEAF APHID counts high in late grain sorghum in southern Oklahoma and on barley in Monterey County, California. (p. 939).

CABBAGE LOOPER severe on lettuce in Imperial County, California, and building up on same crop in Eddy County, New Mexico. (p. 940).

Haptoncus luteolus populations on figs high in Madera and Fresno Counties, California. (p. 940).

PINK BOLLWORM heavy in green bolls in southern Dona Ana County, New Mexico. (p. 941).

INSECT DETECTION: A Scale new to Oklahoma. (p. 942).

CORRECTIONS. (p. 943).

SUMMARY OF INSECT CONDITIONS - UTAH - 1958. (p. 944).

INSECTS not known to occur in the United States. (p. 949).

WEATHER OF THE WEEK ENDING NOVEMBER 10

A succession of changes in the weather occurred as pressure systems swept across the Nation during the week. These changes mostly affected the more northern States, but at times spread into Southern areas except the Southwest. Dry weather persisted from southern California and southwestern Arizona eastward over the southern Great Plains. The High Plains of Texas have had no significant rain for over a month. Temperatures over most of the country averaged higher than for the previous week. This was especially noticeable in Texas and the Rocky Mountain and Pacific States. Saturday and Sunday's temperatures equaled or exceeded previous records for so late in the fall at West Palm Beach, Florida (90° on the 8th equaled previous record), Winnemucca, Nevada (75° on the 9th), and Salt Lake City, Utah (74° on the 9th). Brisk winds accompanied a series of disturbances inland over the Pacific Northwest and Northern Interior. Precipitation fell on most days in the Pacific Northwest and Idaho. Monday brought damaging winds to the Pacific Northwest. Blowing dust was raised at Idaho Falls, Idaho, and gusts of 64 m.p.h. occurred at Livingston, Montana. On Tuesday, this energetic disturbance joined a weather front extending from northern California to N. Dakota. It brought damaging winds to Wyoming, where Sheridan reported peak gusts of 86 m.p.h. The arrival of chilling winds dropped temperatures to freezing in a few hours. In South Dakota, western Nebraska and Kansas these winds whipped up dust early Tuesday evening and on Wednesday gusts rose to 63 m.p.h. at Mason City, Iowa, and extended over much of the Midwest. On Thursday morning cold, dry air poured across the Appalachians and brisk westerly and northwesterly winds swept into the North Atlantic States. On Friday, Ohio had its coldest temperatures of the season. More high winds occurred the latter part of the week in the northern Great Plains, northern Rockies and Pacific Northwest. Blizzard conditions impeded traffic in the northern mountain passes of Colorado.

Freezing temperatures over much of the same area as the previous week extended further southward into parts of northern Louisiana and northern Georgia. Generally, temperatures for the week averaged 3° or more above normal north of a line joining southeastern Arizona and upper Michigan, while elsewhere averages ranged from near normal to about 3° below normal. Most of the country had less than one-half inch of precipitation. The larger weekly totals exceeded 3 inches in parts of Florida and west of the Cascade Mountains. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - CALIFORNIA - Survey completed by County, State and Federal personnel indicated potential population of 7 or more grasshoppers per square yard can be expected to infest approximately 4,523,300 acres of grassland under normal conditions in 1959. (Cal. Coop. Rpt., Sept.). NEW MEXICO - Damaged borders of winter wheat fields adjacent to non-cultivated fields. About 10,000 acres replanted in Curry County, farmers preferring this to attempting controls. (N. M. Coop. Rpt.). UTAH - Largely *Melanoplus* spp. are especially numerous in mountains south of Mantua, Box Elder County. (Knowlton).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - ARKANSAS - Infestations in southwestern counties much lower than other counties, since these counties were infested for first time in 1958. (Ark. Ins. Rpt.). VIRGINIA - Density survey in 20 northern and southwestern counties showed an average of 252 borers per 100 stalks, with 80 percent of stalks examined being infested. The 1957 figures were 117 borers per 100 stalks and 63 percent of examined stalks infested. (Morris). OKLAHOMA - Survey of some corn fields in Nowata, Tulsa and Payne Counties failed to show presence of infestations. (Arbuthnot).

SORGHUM WEBWORM (*Celama sorghiella*) - OKLAHOMA - Averaged 4-10 per head in a few fields of late grain sorghums in southern areas. (VanCleave).

TERMITES - VIRGINIA - Unidentified species found hollowing out corn stalks in Nansemond County and causing stalks to break over in late October. (Matheny).

CORN LEAF APHID (*Rhopalosiphum maidis*) - OKLAHOMA - Averaged as high as 1,000 per head in a few fields of late grain sorghum in southern part of State. (VanCleave). TEXAS - Heavy and damaged Sudan grass in Frio County. (Harding). CALIFORNIA - Heavy on barley in Soledad area, Monterey County. (McLean).

WINTER GRAIN MITE (*Penthaeus major*) - TEXAS - Light to medium in barley and oat fields in Madison County. (Garrett).

PEA APHID (*Macrosiphum pisi*) - UTAH - Ranged scarce to moderate on Cache County alfalfa. (Knowlton). KANSAS - Numbered about 50 per sweep at Hays, Ellis County, November 1. (Harvey).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - OKLAHOMA - Averaged 10-25 per sweep in southern and south central alfalfa fields. (VanCleave). UTAH - Scarce to moderate on alfalfa in Cache County. (Knowlton). ILLINOIS - Collected in Union County, but exact population counts were not made. (Ill. Ins. Rpt.). KANSAS - Numbered about 50 per sweep at Hays, Ellis County, November 1. (Harvey).

TARNISHED PLANT BUG (*Lygus lineolaris*) - OKLAHOMA - Averaged 0-2.5 per sweep in southern and south central alfalfa fields. (Van Cleave).

ALFALFA WEEVIL (*Hypera postica*) - MASSACHUSETTS - Larvae ranged 0-110 and adults 0-3 per 100 sweeps in Worcester County, October 3. Heaviest infestation at Dudley. Larvae ranged 14-37 per 100 sweeps in Norfolk County on same date; 0-1 in Hampshire County, October 6; and 0-24 in Barnstable County, October 8. Adults averaged 0-2 per 100 sweeps and larvae 0 in Berkshire County, October 10, which is unusual in that this is one of the areas of original infestation. (Lavigne, Shaw). DELAWARE - Larvae in some alfalfa fields in Kent and New Castle Counties. Adults averaged 1-2 per 10 sweeps in several Kent County alfalfa fields. (Burbutis, Conrad).

LESSER CLOVER LEAF WEEVIL (*Hypera nigrirostris*) - DELAWARE - In red clover in New Castle and Kent Counties. (Burbutis, Conrad).

CLOVER ROOT CURCULIO (Sitona hispidula) - MASSACHUSETTS - Adults ranged 0-2 per 100 sweeps in Worcester County and 0-9 in Norfolk County, October 3; 0-9 in Barnstable County, October 8; and 1-32 in Berkshire County on October 10. Adult fall population in extremely light. Many dead specimens were observed in the field attacked by Beauveria bassiana. (Lavigne, Shaw).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - OKLAHOMA - Averaged 0.4-2 per sweep in southern and south central alfalfa fields. (VanCleave).

POTATO LEAFHOPPER (Empoasca fabae) - DELAWARE - Common to prevalent in some alfalfa fields in Kent and New Castle Counties. (Burbutis, Conrad).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - OKLAHOMA - Averaged 0.5-1 per sweep in alfalfa fields in the southern and south central parts of the State. (VanCleave).

GRANULATE CUTWORM (Feltia subterranea) - CALIFORNIA - Continued a major pest of lawns in many locations in State and remained heavy in dichondra lawns in San Diego, San Diego County. (Cal. Coop. Rpt.).

WHITE GRUBS.- NEW MEXICO - Light and damaged fescue lawns at Las Cruces, Dona Ana County. (N. Mex. Coop. Rpt.).

FRUIT INSECTS

CALIFORNIA RED SCALE (Aonidiella aurantii) - CALIFORNIA - Heavy on citrus at Sanger, Fresno County, and light on an orange tree in Fillmore, Ventura County. (Cal. Coop. Rpt.).

A VINEGAR FLY (Drosophila melanogaster) - CALIFORNIA - Occurred in extremely larger numbers in fig orchards and dry yards than ever before experienced in Merced and Fresno Counties. Late-season warm weather is considered responsible. (Fig Institute).

Fig Insects in California - Haptoncus luteolus far outnumbered Carpophilus hemipterus this season. Normally it is only 3-5 percent of the population but this season it ran 30-40 percent of populations infesting figs in Madera and Fresno Counties. (Fig Institute).

SMALL CHESTNUT WEEVIL (Curculio auriger) - VIRGINIA - Damaged chestnuts on trees on a Franklin County farm. Det. W. H. Anderson. (Rowell, Tucker).

WALNUT CATERPILLAR (Datana integerrima) - TEXAS - Light and attacked pecan trees near Greenville, Hunt County. (Davis).

RED-NECKED CANE BORER (Agrilus ruficollis) - OKLAHOMA - Populations in Payne County brambles appear lower than in last 3 years. (Bieberdorf).

TRUCK CROP INSECTS

CABBAGE LOOPER (Trichoplusia ni) - CALIFORNIA - Severe in lettuce plantings in the El Centro area, Imperial County. (Swift). DELAWARE - On cabbage in area of Kent County. (Burbutis, Conrad). NEW MEXICO - Again building up in lettuce fields in Eddy County. Damage as high as 30 percent in some Dona Ana County fields. (N. M. Coop. Rpt.).

IMPORTED CABBAGEWORM (*Pieris rapae*) - DELAWARE - Present on cabbage in New Castle County. Prevalent to abundant on cabbage and cauliflower in area of Kent County, with heavy feeding on younger heads. (Burbutis, Conrad).

CABBAGE APHID (*Brevicoryne brassicae*) - On brussel sprouts in New Castle County and one field of cabbage in Kent County. (Burbutis, Conrad).

A LEAF MINER (*Liriomyza* sp.) - CALIFORNIA - Caused heavy mining of cauliflower plants in Watsonville area, Santa Cruz County. (Cal. Coop. Rpt., Oct. 31).

BEAN LEAF ROLLER (*Urbanus proteus*) - FLORIDA - Larvae averaged 2-4 per plant in 10 acres of snap beans in an abandoned field at Hague, Alachua County. Det. W. P. Hunter. (Fla. Coop. Sur.).

SPOTTED CUCUMBER BEETLE (*Diabrotica undecimpunctata howardi*) - DELAWARE - Present on spinach and carrots in Kent and New Castle Counties. (Burbutis, Conrad).

A LEAFHOPPER (*Ollarianus strictus*) - CALIFORNIA - Adults heavy on asparagus plantings at El Centro, Imperial County. (Cal. Coop. Rpt.).

COTTON INSECTS

PINK BOLLWORM (*Pectinophora gossypiella*) - NEW MEXICO - Heavy in green bolls on about 300 acres and moderately heavy on 700 additional acres in southern Dona Ana County. Cotton gin lint cleaner inspections of 54 gins in 5 counties revealed 336 pink bollworms from a total of 30,546 ginned bales. (N. M. Coop. Rpt.).

WHITEFLIES - CALIFORNIA - Check of cotton fields in Mt. Signal-McCabe areas and Bard Valley, Imperial County, showed generally low population. Check of crumple leaf conditions in these areas showed that losses in yield of cotton previously reported as severe (CEIR 8(40):851) could not be substantiated at this time. Symptoms were readily found in most fields checked, with one stub cotton field showing nearly 100 percent infestation, while other fields showed 10-85 percent infected plants. (Cal. Coop. Rpt., Oct. 24).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

A SAWFLY (*Neodiprion* sp.) - NORTH CAROLINA - Large numbers of adults observed in area of Granville County where there was a severe outbreak in May 1958. Mating and oviposition observed and apparently has just begun as limited numbers of eggs were seen in needles. Four to 10 adults were swarming at 6-8 foot trees and large numbers in larger trees. (Jones, Farrier).

A NITIDULID (*Carpophilus* sp.) - NEW MEXICO - Very abundant in chrysanthemums and roses in Dona Ana and Luna Counties. (N. M. Coop. Rpt.).

COTTONY-CUSHION SCALE (*Icerya purchasi*) - TEXAS - Heavy on several ornamentals in Brazos County (Garner) and light to medium in Cherokee County (Chandler).

EUONYMUS SCALE (*Unaspis euonymi*) - CALIFORNIA - Heavy on euonymus plants in Menlo Park, San Mateo County. (Cal. Coop. Rpt.).

SCALE INSECTS - FLORIDA - Cryptemichionaspis ulmi (?) collected on elm at Sanford, Seminole County, May 28. Det. H. Morrison. If positive determination is obtained, this will constitute a new State record for this scale. (Fla. Coop. Sur.). OKLAHOMA - Aspidiotus pseudospinosus collected September 26 on Ilex sp. at Tulsa, Tulsa County, and October 1 on Amaranthus sp. in a store at Edmond, Oklahoma County, is new to the State. (Apt).

APHIDS - NEW MEXICO - Rhopalosiphum rufomaculatum and Macrosiphoniella sanborni heavy on chrysanthemums in Dona Ana County. (N. M. Coop. Rpt.).

THRIPS - NEW MEXICO - Light in roses and chrysanthemums in southern counties. (N. M. Coop. Rpt.).

INSECTS AFFECTING MAN AND ANIMALS

HORN FLY (Siphona irritans) - OKLAHOMA - Averaged 25-75 per head of cattle in southern and south central parts of State. (VanCleave).

A HORSE BOT FLY (Gasterophilus sp.) - OKLAHOMA - Egg laying light to medium on horses in southern part of State. (VanCleave).

SCREW-WORM (Callitroga hominivorax) - MISSISSIPPI - Positive case reported from a farm at Port Gibson, Claiborne County, October 28. (Pate).

A CATTLE LOUSE (Solenopotes capillatus) - VIRGINIA - Medium to heavy on dairy heifers in herd at Blacksburg, Montgomery County. (Turner).

BENNEFICIAL INSECTS

PREDATORS - VIRGINIA - Soldier beetle larvae in large numbers around a home in Botetourt County (Morris, Leonard) and in large numbers around yards and houses and in hay fields in Essex County (Amos, Richardson). Arilus cristatus collected in Spotsylvania and Floyd Counties. (Morris, Kash, Talley). OKLAHOMA - Hippodamia convergens averaged 0.5-1 per sweep in alfalfa in southern and south central areas, Nabis sp. 0.2-0.8 and lacewings 0.2-0.5. (VanCleave).

MISCELLANEOUS INSECTS

BROWN-BANDED ROACH (Supella supellectilium) - NORTH DAKOTA - Two new home infestations reported from Fargo, Cass County. Spread continues in the State. (N. D. Ins. Rpt.).

ORIENTAL COCKROACH (Blatta orientalis) - NORTH DAKOTA - Reported in a home at Linton, Emmons County. (N. D. Ins. Rpt.).

CASEMAKING CLOTHES MOTH (Tinea pellionella) - TEXAS - Larvae caused damage to carpets in homes in Corpus Christi, Nueces County. (Reynolds).

A LYCTUS BEETLE (Lyctus sp.) - OREGON - Damaged wooden furnishings in a home in Portland, Multnomah County. (Capizzi).

A WEEVIL (Trachyploeus bifoveolatus) - OREGON - Entered homes and caused concern to residents in Portland, Multnomah County, and Oregon City, Clackamas County. (Capizzi).

A SUBTERRANEAN TERMITE - UTAH - Infesting a home at Vernal, Uintah County.
(Knowlton).

CORRECTIONS

CEIR 8(43):902 - Delete Alypiodes geronimo (Barnes): species has been recorded from Arizona.

CEIR 8(43):908 - Change family name from Phalaenidae to Noctuidae following Plusia chalcites (Esp.) and Spodoptera mauritica (Bdv.).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Ala. argil.	Helio. zea
ARKANSAS							
Fayetteville 10/9-29	6	2			1		278
Kelso 10/9-29	14	14		5	11		226
Morrilton 10/9-29	69	154					228
FLORIDA							
Gainesville 10/29-11/4		2					3
Quincy 10/21-27	1	2					
INDIANA(Counties)							
Orange 10/18-21	22	60	2	25	2		17
Tippecanoe 10/23-30	18	19		7			11
LOUISIANA							
Baton Rouge 10/24-11/6	62	62	4	3	75	174	46
Franklin 10/28-11/3				2	2	5	1
MISSISSIPPI							
*State College 10/25-11/7	24	31	1	1	11		110
NEBRASKA							
Alliance 10/6-26	127	6		15	1		67
North Platte 10/10-30	1814	916	5	287	445		2685
Scotts Bluff 10/14-11/3	276	55		66			52
SOUTH CAROLINA							
Charleston 10/27-11/9	39	38	4	1	10	2	6
Clemson 10/25-31	5	11	1	1	3		1
Florence 10/26-11/1	20	10	4	1	1	1	
TENNESSEE(Counties)							
Blount 10/21-11/3		6	6	1	2		3
Cumberland 10/21-11/3	17	88	1	3	2	1	37
Greene 10/21-27	26	15	4	1	4	2	13
Johnson 10/21-11/3	16	11	3	7	3	1	12
Madison 10/21-11/3	10	11	27		3		21
Maury 10/21-11/3	49	46	7	4	8	2	19
Robertson 10/21-11/3	36	66	9	4	6	20	48
TEXAS							
Waco 10/25-31	77		12	55		1198	36

*Two traps - State College

SUMMARY OF INSECT CONDITIONS - 1958

UTAH

Reported by G. F. Knowlton, D. W. Davis, H. E. Dorst,
H. F. Thornley, B. A. Haws and County Agricultural Agents

The season of 1958 was one of extreme insect and mite activity. Beet leafhopper and the curly-top virus disease were responsible for the loss of approximately 85 percent of the tomatoes planted in the State. In addition it reduced sugar beet tonnages measurably and killed out large acreages of other susceptible crops. False chinch bugs were the most abundant and general they had been in 35 years. Pea aphid and spider mites were especially damaging to deciduous tree fruits, berry crops, shade trees and ornamentals. Lygus bugs, alfalfa weevil, forest tent caterpillar, Say stink bug, thrips on grains and alfalfa, codling moth, peach twig borer, corn earworm, mites on corn, many aphids in spring, and pea aphid all season, rose and Virginia-creeper leafhoppers, white grubs in lawns, cattle lice, house flies, mosquitoes and boxelder bug were among the species much more damaging than normal.

Cereal and Forage Insects: GRASSHOPPERS caused substantial crop and range losses, estimated at \$570,420. Considerable control resulted in an estimated saving of \$345,850. Control was carried out in cropland largely by farmers, ranchers, orchardists and home gardeners. The most damaging grasshopper species were *Melanoplus bilituratus*, *M. bivittatus*, *M. femur-rubrum*, *M. packardii*, *M. borealis*, *Camula pellucida* and *Aulocara ellioti*. Cooperative programs controlled grasshoppers over an area of 110,000 acres, in protecting an estimated 340,000 acres. MORMON CRICKET (*Anabrus simplex*) was aircraft baited and controlled over 26,258 acres of rangelands in San Juan, Piute and Uintah Counties, in time to prevent economic losses. A total of 11,150 acres were infested at egg-laying time, threatening outbreaks during 1959.

SPOTTED ALFALFA APHID (*Therioaphis maculata*) caused most serious damage to alfalfa crops over the southern one-half of the State, with some control in Washington and Millard Counties. Estimated loss of alfalfa hay, seed and new plantings is placed at \$95,000 compared with an estimated \$780,000 loss during 1955, \$500,000 loss in 1956 and \$165,000 loss in 1957. The aphid moved northward as far as Tooele, Salt Lake, Carbon and Emery Counties. PEA APHID (*Macrosiphum pisi*) caused substantial losses of forage alfalfa hay and reduced seed production in several areas. Many outbreaks developed in spring and early summer and damage continued until late fall. Injury to canning peas was light generally. LYGUS BUGS (largely *Lygus elisus*, *L. hesperus* and *L. desertus*) were very abundant on seed alfalfa and seed beet crops in most areas, resulting in economic losses wherever control was delayed or omitted. SUPERB PLANT BUG (*Adelphocoris superbus*) was in normal numbers in alfalfa. SWEETCLOVER WEEVIL (*Sitona cylindricollis*) has spread to all counties of Utah, except Daggett County. Damage was less conspicuous than during 1954 and 1955. ALFALFA WEEVIL (*Hypera postica*) caused severe damage to much untreated alfalfa acreage. Benefit from control is estimated to exceed \$560,000. ALFALFA CATERPILLAR (*Colias philodice eurytheme*) caused local crop injury in several counties. A TORTRICID (*Tortrix pallorana*) caused scattered seed crop injury, largely in northern areas. ARMY CUTWORM (*Chorizagrotis auxiliaris*) damaged less alfalfa and range plants in spring than normal. WESTERN YELLOW-STRIPED ARMYWORM (*Prodenia praeifica*) damage to some alfalfa, tomato and truck crops in Cache, Box Elder, Weber, Davis and Millard Counties was estimated at \$84,000. Damage by *P. ornithogalli* occurred in many southern and south central areas.

VARIEGATED CUTWORM (Peridroma margaritosa) caused local damage to alfalfa in Juab, Piute and Millard Counties. ALFALFA LOOPER (Autographa californica) caused scattered, moderate damage. BROWN WHEAT MITE (Petrobia latens) was less damaging, particularly after spring rains ended. Damage was most severe in Juab and San Juan Counties. CORN LEAF APHID (Rhopalosiphum maidis) caused damage to spring barley in several counties. Injury to corn was light. An ORCHARD GRASS APHID (Hyalopteroides dactylidis) damaged this grass in local areas. ENGLISH GRAIN APHID (Macrosiphum granarium) caused less than normal damage to small grains. SWEETCLOVER APHID (Myzocallidium riehmii) was general but not economic. MIRIDS (largely Stenotus binotatus and Leptopterna ferrugatus) damaged grasses and small grains in local areas. SAY STINK BUG (Chlorochroa sayi) caused very extensive damage to small grains and to alfalfa seed crops, estimated to exceed \$1,000,000. Repeated migrations were noted about the State from May into early September. A FALSE CHINCH BUG (Nysius sp.) was extremely numerous on range and about alfalfa and grain fields, roadsides, etc. CORN EARWORM (Heliothis zea) caused extensive damage to sweet corn and moderate to serious injury to field corn throughout Utah. Infestations varied from 80 to 100 percent where no control was applied. Mite damage to corn was unusually severe over much of the State. Local injury occurred from wheat straw-worm, wireworms, false wireworms, corn sap beetles, thrips and flea beetles in scattered localities. WESTERN HARVESTER ANT (Pogonomyrmex occidentalis) caused usual damage to range and forage crop lands. CLOVER SEED CHALCID (Bruchophagus gibbus) caused approximately normal economic damage. CLOVER SEED WEEVIL (Miccotrogus picrostris) was found in Cache County, apparently new to the State.

Fruit Insects: Aphid infestations on fruits generally were above normal. WOOLLY APPLE APHID (Eriosoma lanigerum), A LEAF-CURL APHID (Anuraphis helichrysi), ROSY APPLE APHID (Anuraphis roseus) and GREEN APPLE APHID (Aphis pomi) were conspicuously damaging in many localities. CODLING MOTH (Carpocapsa pomonella) infestations in well-sprayed orchards sometimes ran five to twenty percent; unsprayed or poorly sprayed orchards often were 100 percent "wormy". SPIDER MITES were commonly severe in apple and pear orchards and on raspberry and red currant crops. Bryobia praetiosa complex was generally less numerous and less damaging in orchards this season. Eotetranychus willamettei was present in some localities, especially on apples. Tetranychus mcdanieli was highly injurious in many apple and sour cherry orchards in Weber and Box Elder Counties. It caused severe damage to raspberry and red currant foliage in a number of counties. Panonychus ulmi was well above normal in northern orchards. Tetranychus canadensis infested a few orchards. PEAR LEAF BLISTER MITE (Eriophyes pyri) was extremely damaging, particularly to a few large orchards in Utah County. PEACH SILVER MITE (Vasates cornutus) and A PLUM NURSERY MITE (V. fockeui) were occasionally damaging, especially in Washington and Utah Counties. A CHERRY RUST MITE was sometimes injurious in Utah County. Mite injury, in general, was very much above average in orchards and berry patches. LEAFHOPPERS often varied from numerous to abundant on apple, plum and prune, and in fall on raspberries in some localities. A GEMINATE LEAFHOPPER (Colladonus geminatus) again was low in numbers in alfalfa fields and orchards. SAN JOSE SCALE (Aspidiotus perniciosus) was locally damaging. PEAR-SLUG (Caliroa cerasi) caused moderate to sometimes severe damage to cherry, pear and plum foliage. CALIFORNIA PRIONUS (Prionus californicus) damaged roots of some fruit trees in northern counties. CATFACING INSECTS caused moderate damage. Damage to ripe fruits by BOXELDER BUG (Leptocoris trivittata) was well above normal in northern and central Utah. PEACH TREE BORER (Sanninoidea exitiosa) and WESTERN PEACH TREE BORER (S. e. graefi) caused general damage to stone fruit orchards throughout the State. PEACH TWIG BORER (Anarsia lineatella) caused above average damage quite generally to fruits and twigs. PEAR THRIPS (Taeniothrips inconsequens) was moderately numerous in cherry and pear orchards in spring. CHERRY FRUITWORM (Grapholitha packardii) was not common in

cherries this season. CLIMBING CUTWORMS damaged occasional orchards in Box Elder, Salt Lake and Weber Counties, with scattered local damage elsewhere. SHOT HOLE BORER (Scolytus rugulosus) caused local damage, especially in weakened cherry, apricot and peach trees. WALNUT HUSK FLY (Rhagoletis completa) again caused economic damage to the English walnut crop at Ogden, and appeared for the first time in black walnuts at Provo. WESTERN GRAPE LEAF SKELETONIZER (Harrisina brillians) was again almost completely controlled by insect parasites and predators. GRAPE BERRY MOTH (Paralobesia viteana) damaged grapes in a few Washington County vineyards. Several species of CURRENT APHIDS caused about normal damage with above normal injury to red currant foliage by Capitophorus ribis. CURRENT FRUIT FLY (Epochra canadensis) generally infested black and yellow currants. A CURRENT PSYLLID was common but rarely severe. MAGGOTS again produced galls in chokecherry fruits in Logan, Blacksmith Fork, Ogden, Parleys and Bountiful Canyons. ROSE STEM GIRDLER (Agrilus rubicola) and RASPBERRY ROOT BORER (Bembecia marginata) damaged a number of raspberry patches in Box Elder, Salt Lake, Utah and Davis Counties. STRAWBERRY LEAF ROLLER (Ancylis comptana fragariae) caused above normal injury, especially in north central counties. STRAWBERRY CROWN MOTH (Ramosia bibionipennis) larvae killed some new raspberry plants, damaged a large number of red currant canes at Huntington and many dewberry canes at Providence. ROOT WEEVILS (Brachyrhinus ovatus, B. rugosostriatus and sometimes B. sulcatus) damaged untreated strawberry patches commonly, with moderate injury to roots of raspberry, some other cane fruits and occasionally roses and privet hedge at Springville.

Nut Insects: WALNUT HUSK FLY (Rhagoletis completa) caused moderate damage in the Ogden area and late in the season was found in black walnut husks at Provo. APHIDS severely infested pecans in southern Utah, English walnuts at Moab and were moderate elsewhere. A FILBERT APHID caused its usual infestation to filberts. Moderate MITE injury to nut tree foliage was sometimes noted.

Truck Crop Insects: TOMATO FRUITWORM (Heliothis zea) population was very low. A "Statement of Outlook" was issued on July 28th, to canners and canning crop growers. This indicated that the tomato fruitworm infestation would be light and insecticide applications to tomatoes not warranted. CORN EARWORM (Heliothis zea) was serious on early market corn, so canning corn growers were informed that an increase in infestation was expected by mid-August. It was indicated that insecticide applications would be warranted, particularly in Utah County. Approximately 50 percent of the northern canning corn acreage was treated, 70 percent in Utah County, where one canning company applied insecticides to about 2000 acres. Control started in July and continued into early September. Damage was severe to late season canning corn. The infestation was the highest it has been since 1952. One hundred percent infestation was common when not controlled. TOMATO RUSSET MITE (Vasates lycopersici) was not damaging. LYGUS BUGS (predominantly Lygus elisus) were very abundant on sugar beet seed crops in southern and northern areas in spring of 1958. This and SAY STINK BUG were controlled on all southern seed beet plantings and on a portion of the acreage in northern Utah. The late winter population of BEEF LEAFHOPPER (Circulifer tenellus) and host plant area was large in northern Mexico, southwestern Arizona, southeastern California, southern Nevada and southern Utah. A "Statement of Outlook" was issued February 27, and substantiated in the Report of April 11, that the expected movement of the beet leafhopper in late April and May would be approximately 1500 times larger than in 1957 and 30 times larger than in 1952. The movement started May 6. Population on sugar beets averaged 1.0 leafhopper per square foot of beet row by May 15. It increased to 8 leafhoppers per foot of beet row the last week of May and first week of June. Populations were the highest since the destructive outbreak of 1926. Damage to tomatoes, sugar beets, potatoes, beans, cucumbers, squash and other susceptible crops is estimated to well exceed \$1,000,000. Some potato fields intended for seed certification could not be certified due to beet leafhopper transmitted curly-top disease. VINEGAR FLY (Drosophila

melanogaster) population in tomato fields was lower than 1957, until mid-September and early October, when the population became heavy. Heaviest populations originated near orchards where substantial fruit droppings occurred or where culled fruit was discarded. APHIDS were about normal on vegetable crops in spring, below normal in mid-summer. SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons), and A LEAFHOPPER (Empoasca filamenta) caused occasional damage in local areas. Melons in southern Utah were damaged by large populations of the latter species. A BLACK FLEA BEETLE again damaged sweet corn throughout the season in Washington County. Some damage occurred in other southern counties, and in a few spots farther north. FLEA BEETLE damage generally was moderate to normal in gardens, with an occasional potato and sugar beet field severely attacked. MELON APHID (Aphis gossypii) damage to cucumbers, squash and cantaloups was below normal. DUSKY SAP BEETLE (Carpophilus lugubris) caused local injury to sweet corn in Utah County and in many other communities, largely in home gardens. Damage was greatest in southern and south central counties. SQUASH BUG (Anasa tristis) caused less than normal injury. SEED-CORN MAGGOT (Hyalemya cilicrura) injury was occasionally severe in Washington County, usually normal elsewhere. ONION MAGGOT (H. antiqua) injury was common. CORN LEAF APHID (Rhopalosiphum maidis) damage was light on corn. TWO-SPOTTED SPIDER MITE damage sometimes was severe on canning and home garden sweet corn, being worse in some areas of field corn. Damaged celery in Box Elder County was conspicuous in the fall. POTATO TUBERWORM (Gnorimoschema operculella) was scarce in Washington and Iron Counties. COLORADO POTATO BEETLE (Leptinotarsa decemlineata) was more generally damaging in Weber and Davis Counties, and locally at Kanab. MEXICAN BEAN BEETLE (Epilachna varivestis) caused conspicuous damage in a number of northern and central counties. PEA WEEVIL (Bruchus pisorum) was numerous, requiring general control on canning peas. Spider mites, thrips and aphids caused some damage to beans. SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) and STRIPED CUCUMBER BEETLE (Acalymma vittata) caused moderate damage to susceptible crops, particularly in southern Utah. ASPARAGUS BEETLE (Crioceris asparagi) and SPOTTED ASPARAGUS BEETLE (C. duodecimpunctata) caused normal damage in northern and some central counties. ONION THRIPS (Thrips tabaci) injury to onions was common. CUTWORM damage was common in spring but lower during mid and late-summer. WESTERN YELLOW-STRIPED ARMYWORM (Prodenia praefica) caused damage to tomatoes, beans and home gardens in a number of northern localities, usually when larvae migrated from heavily infested alfalfa fields. HORNWORMS (Protoparce spp.) caused spotted, sometimes conspicuous damage to tomatoes and potatoes. IMPORTED CABBAGEWORM (Pieris rapae) damage was normal, with CABBAGE LOOPER (Trichoplusia ni) injury above average. GARDEN CENTIPEDE attacked home gardens and occasionally commercial crops in scattered central and northern localities.

Shade Tree Insects: FOREST TENT CATERPILLAR (Malacosoma disstria) caused extensive damage to foliage of maples, poplars, willows and other shade trees and also to ornamentals, especially in northern areas. APHIDS on shade trees were unusually troublesome during spring. A COTTONWOOD BLOTCH LEAF MINER (Paraleucoptera albella) caused much less conspicuous damage in the Sevier-Piute County area, along the Sevier River and Clear Creek Canyon. Leaf miners conspicuously infested quaking aspen foliage in a number of northern mountain areas, but less extensive damage occurred than in 1956 and 1957, while poplar and cottonwood leaf miner infestations were noted in scattered communities. A BOXELDER LEAF ROLLER (Archips negundana) caused only local damage. BOXELDER PSYLLID (Psylla negundinis) generally was moderate. NORWAY-MAPLE APHID (Periphyllus lyropictus), A LEAF-CURL ASH APHID (Prociphilus fraxinifoliae) and several other aphids caused less than normal damage to shade trees. Willows and narrow leaf poplars were sometimes severely infested with aphids, with POPLAR VAGABOND APHID (Mordwilkoja vagabunda) serious in parts of the Uintah Basin. GREAT BASIN TENT CATERPILLAR (Malacosoma fragilis) caused below normal injury in Washington, Kane and San Juan Counties to poplars and other susceptible trees and shrubs. COOLEY SPRUCE GALL APHID (Chermes cooleyi)

caused below normal damage. LOCUST BORER (Megacyllene robiniae) damage increased in Salt Lake County, killing and damaging many trees. LEAFHOPPER injury to elms was above normal. OYSTERSHELL SCALE (Lepidosaphes ulmi) caused extensive injury especially to ash, poplar, willows and lilacs. A MITE (Eotetranychus weldoni) caused substantial injury to weeping willow and black willow foliage. ELM LEAF BEETLE (Galerucella xanthomelaena) was particularly destructive to elm foliage in Salt Lake and Weber Counties.

Insects of Ornamentals: LEAFHOPPERS (Erythroneura ziczac, E. elegans and spp.) again extensively damaged Virginia creeper foliage during late summer and fall in many communities. Leaves frequently were brown and dead before late August. ROSE LEAFHOPPER (Edwardsiana rosae) discolored foliage of cultivated roses generally, becoming numerous on spirea in fall in some northern localities. SPIREA APHID (Aphis spiraeicola), POTATO APHID (Macrosiphum solanifolii), ROSE APHID (M. rosae) and other aphids were among those which injured ornamentals during the season. JUNIPER SCALE (Diaspis carueli) caused severe damage in some parts of Box Elder, Emery and Salt Lake Counties. A WESTERN FLOWER THRIPS was again abundant in most cultivated and wild-flower blossoms. EUROPEAN EARWIG (Forficula auricularia) caused its usual widespread annoyance and some damage about homes and gardens over most of the State. WHITE GRUBS damaged numerous lawns in more counties and communities than usual. BEET LEAFHOPPER damage to petunia was moderate to severe in Davis and Weber Counties.

Insects Affecting Livestock: CATTLE LICE caused extensive damage generally over the State with many herds being severely infested. CATTLE GRUBS (Hypoderma lineatum and H. bovis) caused substantial but normal damage. HORSE BOTS were common and bot flies very annoying to horses in a number of localities. HORN FLY (Siphona irritans), STABLE FLY (Stomoxys calcitrans), HORSE FLIES, DEER FLIES and BLOW FLIES caused common and about average annoyance to livestock. HOUSE FLY (Musca domestica) numbers and annoyance were excessive over the State, especially in late summer and fall. MOSQUITOES were troublesome in spring and summer, with some equine encephalitis developing in horses in several counties. POULTRY MITES and LICE and HOG LICE were fairly common, sometimes present in abundance. EAR TICK (Otobius megnini) caused local livestock damage in a few counties. TICKS, particularly Dermacentor andersoni, were numerous during spring on cattle and horses, and attacked persons on rangelands. A SARCOPHAGID (Wohlfahrtia opaca) larvae sometimes attacked livestock, kit mink and other animals. A SNIPE FLY (Symphoromyia hirta) seriously annoyed man and cattle in some canyons. SHEEP KED (Melophagus ovinus) was abundant and injurious generally, especially on lambs and in winter. Maggots also caused damage.

Man and Household: HOUSE FLY was commonly very numerous throughout the State in cities, towns, on farms and in establishments handling food. CLUSTER FLY (Pollenia rudis) invaded many homes in fall. COCKROACHES infested many commercial establishments and various homes, apartments, motels, etc. A few BED BUG infestations were noted. Clover mite was especially troublesome in many counties during late winter and spring. A tiny BAGWORM (Apterona crenulella) infested the outside of a few northern homes, as well as ornamentals and fruit trees about homes, but chief damage was to range plants in Cache, Box Elder, Rich, Summit and Weber Counties. STORED-FOOD INSECTS in homes caused damage and annoyance in pantries, kitchens and to stored foods. Such damage extended to granaries, livestock feeds. A SUBTERRANEAN TERMITE again damaged many homes and other buildings in various parts of the State. Termite damage becomes more extensive each year. BITING MIDGES were extremely troublesome in many localities for a 2 to 5 week period during the summer. Some of the worst annoyance occurred about the Great Salt Lake, parts of Millard and Juab Counties. Locally elsewhere. MOSQUITOES were unusually troublesome in spring and in many areas throughout the season. The outbreak of encephalitis in northern counties caused concern about the mosquito problem, particularly in Davis, Weber, Salt Lake, Utah, Box Elder and Cache Counties. BLACK WIDOW SPIDER (Latrodectus mactans) was frequently found about homes and farm buildings.

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

LEMON BUTTERFLY (Papilio demoleus (L.))

Economic Importance: This papilionid is widely distributed from Africa to northern Australia and is sometimes a destructive pest of citrus in several areas, especially to young nursery plants. It also sometimes causes serious damage to older plants, stripping the leaves when larvae are numerous. Cultivated and wild citrus are considered the most important hosts, certain varieties being more readily attacked at different locations. Several subspecies of P. demoleus are known, P. d. demoleus and P. d. malayanus, being considered major pests in the Indian area.

Distribution: Range extends from Formosa and China to Iran, Arabia and the whole of Africa. Also occurs in the smaller Sunda Islands to northern Australia and southern New Guinea; absent from the Philippines, larger Sunda Islands, Celebes and the Moluccas.

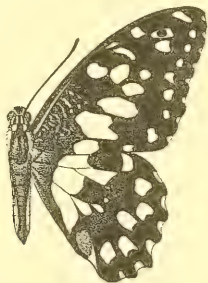
Hosts: Larval feeding occurs on leaves of cultivated and wild citrus, baelfruit, Chinabox jasminorange, curryleaffree, Malaytea scurpfa, atalantia, Malay glycosmis and common jujube. In Ceylon, larvae prefer leaves of Ferronia elephantum.



General Distribution of Papilio demoleus

Life History and Habits: Eggs are laid on leaves, usually singly, but sometimes in groups of 2 or 3. Hatching occurs in 3 days, larval feeding beginning almost immediately. There are usually 5 larval instars, occasionally only 4 occur. Pupation takes place on the underside of a leaf or against a stalk or twig, the supporting loop of the chrysalis rather short. Occasionally larvae may migrate to other plants to pupate. The butterflies have a quick, strong flight, rising very little above the ground. They prefer the flowers of citrus and Raphanus. The total life-cycle varies from 20 to 100 days in summer. Hibernation takes place in the pupal stage, but year-around reproduction is not uncommon in milder climates. Larvae throw out a red Y-shaped process from behind the head and emit a characteristic odor when disturbed.

Description: Adults somewhat variable, depending on subspecies. Body, sides of head, lateral thoracic stripes pale yellow. Forewing above base dotted with pale yellow, dots uniting into transverse lines; large cell-patch, usually divided into 2 spots, at upper angle of cell 2 or 3 spots; a macular discal band, upper spots small and far apart, posterior ones large and usually contiguous; band on hindwing not interrupted; both wings with row of submarginal spots and small marginal lunules, hindwing with red anal spot, not tailed. Egg pale-yellow; about 1 mm. in diameter. Young larva blackish, large V-spot in middle; lateral stripe from prothorax backwards, second stripe from anal segment forwards, milky-white; several rows of setiferous processes. Mature larva yellow-green above, broad-greasy white lateral band from segment 5 to end. Greenish dorsal part of segments 2 to 5 bordered narrowly with curved black line which does not reach base of legs; abdomen and legs a dirty transparent white. Segments 8 and 9 with diagonal yellow-brown band reaching from center of 9 near dorsum to anterior margin of segment 8; similar patch at posterior lower margin of segment 10. Prolegs large and fleshy. Length 33 mm. width 7 mm. Pupal color variable. Length 30 mm.; width 10 mm. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies and the U. S. N. M.) CEIR 8(46) 11-14-58



Adult of Papilio demoleus demoleus (L.)

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

SPOTTED ALFALFA APHID counts highest for year in eastern Kansas. (p. 953).

AN AUSTRALIAN SOD FLY becoming serious pest of lawns in San Francisco, California. (p. 954).

High catch of adult SOUTHERN POTATO WIREWORM at Charleston, South Carolina. (p. 955).

WHITE-PINE SAWFLY defoliating white pine plantings near Clemson, South Carolina. (p. 955).

INSECT DETECTION: Walnut husk fly taken for first time in Santa Cruz County, California. (p. 954).

INSECTS not known to occur in the United States. (p. 959).

WEATHER BUREAU 30-DAY OUTLOOK

MID-NOVEMBER TO MID-DECEMBER 1958

The Weather Bureau's 30-day outlook for the period mid-November to mid-December calls for temperatures to average above seasonal normals over the eastern half of the nation and below normal over the western half except for near normal along the California coast. Greatest departures are indicated in the northern Rocky Mountain States and the middle Appalachian area. Precipitation is expected to exceed normal over most areas lying between the Great Basin and the Appalachians with occasional snows in the Northern Plains and Rocky Mountain States. Subnormal precipitation is indicated for the South Atlantic States and California. In unspecified areas near normal amounts are anticipated.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 a half year.

WEATHER OF THE WEEK ENDING NOVEMBER 17

Winter's snow and tropical heat are using our Nation for a battle ground. Abnormally warm weather entrenched in the Southeast spread record and near-record temperatures through many eastern states. Tampa, Florida, had record-high temperatures for so late in the year for 3 consecutive days. Records were also broken in Georgia, the Carolinas, Tennessee, Arkansas, Missouri, Kentucky, and Ohio. New England had the warmest week since mid-October. At the other extreme, subzero temperatures have been reported from high spots in northern Nevada and in the Rocky Mountain and Plains States. On Monday the 17th, record-cold temperatures for so early in November were reported from Prescott, with 9° and at Tucson, Arizona, and Santa Maria, California, both with 24°. Snow fell in most areas west of a line from the upper Mississippi Valley to western Texas and reached as far south as Douglas, Arizona, on the Mexican Border. Relatively low altitudes of the mountains of southern California had light snow flurries. Snow depths ranged up to 10 inches or more at Flagstaff, Arizona, and a number of places in more northern States, and reached nearly 3 feet in the Cascades. Snow spread slowly from the West into the northerly Plains States and Mississippi Valley and was accompanied by considerable high drifting winds, blizzard, and near-blizzard conditions through much of the Plains States. Drifts 3 feet deep occurred in parts of residential Bismarck, North Dakota, and drifts blocked roads in Kansas and in other States. Snow fell at the rate of 2 inches per hour at some of the mountain stations in central Wyoming. On Monday the 17th, as the cold air pushed into Texas, peak gusts to 104 m.p.h., were reported at Childress, Texas. Numerous thunderstorms and some tornadoes have occurred in an area from southeast New Mexico to Louisiana and north through the middle Mississippi Valley during the week. These are being pushed eastward by the first severe winter storm of the season. The middle Mississippi Valley has received good soaking rains, the heaviest general rains in about a month. The snows which had fallen earlier in the week in the Northeast with over a foot of snow there, had mostly melted leaving only a few patches on the ground in extreme northern Maine. In the Pacific Northwest, snows the first part of the week built up to a depth of 20 inches at Stampede Pass, Washington, this was followed by rain during the mid-week which melted the snows there down to a remaining depth of 10 inches. However, still later in the week snows reappeared in the mountains, and by Monday morning depths up to near 3 feet were reported in the Cascades. The precipitation and melting snows brought some flooding which was mostly limited to lowland pastures and farmlands in western Washington. Temperatures through Sunday in most of the area from the Plains States eastward averaged 6° or more above normal and 12° or more above normal from north central Texas

Weather continued on Page 958

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - ALABAMA - Several species damaged crimson clover in Chambers and Lee Counties. (Barwood). FLORIDA - Abundant in locations of Osceola County, light to medium on grasses in Brevard County and on decline in Seminole and Hillsborough Counties. (Fla. St. Plt. Brd., Oct. Rpt.). TEXAS - Very light in Dallam and Hartley Counties. Melanoplus bilituratus attacked wheat in Hutchinson County, with 4-6 adults per square yard. Marginal damage light. Eggs easily found in margins, but no egg laying noticed. (Russell).

CORN LEAF APHID (Rhopalosiphum maidis) - ALABAMA - Heavy on grain sorghum in Lee County. (Guyton). OKLAHOMA - Averaged 1500-2000 in scattered heads in some fields of late grain sorghum in east central area of State. (VanCleave).

SORGHUM MIDGE (Contarinia sorghicola) - OKLAHOMA - Damage averaged 20-30 percent in some fields of late grain sorghum in Wagoner and Muskogee Counties. (VanCleave).

SORGHUM WEBWORM (Celama sorghiella) - OKLAHOMA - Averaged 1-3 per head in some fields of late grain sorghum in east central part of State. (VanCleave).

GREENBUG (Toxoptera graminum) - MARYLAND - Damaged young orchard grass seedlings at Clarksville, Howard County. Det. L. M. Russell. (U. Md., Ent. Dept.). OKLAHOMA - Infestations found in winter wheat at Welch, Muskogee and Wagoner. Populations ranged up to 50 per linear foot at Wagoner. (Curtis). TEXAS - Light and attacked wheat in Deaf Smith County. Heavy rust on volunteer and early sown wheat. (Thomas).

ALFALFA WEEVIL (Hypera postica) - DELAWARE - Adults in alfalfa in Kent and New Castle Counties. Larvae averaged 3 per 10 sweeps in one alfalfa field in Kent County. (Burbutis, Conrad).

PEA APHID (Macrosiphum pisi) - DELAWARE - Common to prevalent on red clover and alfalfa in New Castle and Kent Counties. (Burbutis, Conrad). OKLAHOMA - Averaged 1-25 per sweep in east central alfalfa fields. (VanCleave).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Average per sweep, 0-3 in some east central alfalfa fields, 25-30 in Pawnee and Payne Counties. (VanCleave). KANSAS - Counts highest for year following extremely dry fall, with 100 to over 6000 per 5-plant sample in eastern one-third of State. (Burkhardt).

MEADOW SPITTLEBUG (Philaenus leucophthalmus) - DELAWARE - Common on red clover and alfalfa in New Castle and Kent Counties. (Burbutis, Conrad). MARYLAND - Adults taken on red clover at Clarksville, Howard County. Eggs noted on wheat stems nearby, November 7. (U. Md., Ent. Dept.).

PLANT BUGS - DELAWARE - Lygus lineolaris common to prevalent on red clover and alfalfa in New Castle and Kent Counties, and Adelphocoris rapidus up to common on same crops in New Castle County. (Burbutis, Conrad). ALABAMA - L. lineolaris heavy on grain sorghum in Lee County. (Guyton). OKLAHOMA - L. lineolaris averaged 1.5-3 per sweep in some east central alfalfa fields. (VanCleave).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - DELAWARE - Common on red clover in New Castle County and on alfalfa in New Castle and Kent Counties. (Burbutis, Conrad). OKLAHOMA - Averaged 1-2.5 per sweep in some fields of alfalfa in east central part of State. (VanCleave).

POTATO LEAFHOPPER (Empoasca fabae) - DELAWARE - Common on alfalfa in New Castle and Kent Counties. (Burbutis, Conrad).

ENGLISH GRAIN APHID (Macrosiphum granarium) - MARYLAND - Light on young orchard grass seedlings at Clarksville, Howard County. (U. Md., Ent. Dept.).

A PLANTHOPPER (Sogata orizicola) - LOUISIANA - None found to date in survey of rice-growing parishes. Determinations made by J. P. Kramer. (Spink).

A BURROWING BUG (Cyrtomenus mirabilis) - ALABAMA - Damaged roots of chufa grass in Butler County. (Hyche, Oct. 24).

CHINCH BUGS - FLORIDA - Prevalent in north and central Brevard County and caused heavy damage in Sanford and Maitland areas of Seminole County. Infestation declined in Palm Beach County, but continued to damage St. Augustine grass in North Dade County and remained prevalent on same grass in central part of county. Continued a problem to homeowners in Tampa area and caused serious damage in St. Petersburg area. (Fla. St. Plt. Brd., Oct. Rpt.).

GREEN JUNE BEETLE (Cotinis nitida) - NORTH CAROLINA - Larvae caused complete destruction of large areas in newly seeded pasture in Union County. (Morgan, Farrier).

AN AUSTRALIAN SOD FLY (Metoponia rubriceps) - CALIFORNIA - Maggots are becoming a serious pest of lawns in San Francisco, where it was introduced several years ago. Grass in several lawns has been completely killed. (Kessell).

FRUIT INSECTS

BLACK PEACH APHID (Anuraphis persicae-niger) - ALABAMA - Heavy on peach trees in Lee County. (Guyton).

WOOLLY APPLE APHID (Eriosoma lanigerum) - ALABAMA - Common on water sprouts of apple trees in Lee County. (Guyton).

A LEAF ROLLER - TEXAS - Medium on plums in Harris County. (Marburger).

PEACH TREE BORER (Sanninoidea exitiosa) - ALABAMA - Heavy on Lee County peach trees, borers varying from one-quarter to one-half inch in length. (Guyton).

WHITE PEACH SCALE (Pseudaulacaspis pentagona) - ALABAMA - Heavy on peach trees in Escambia County. (Grimes).

BLACK-MARGINED APHID (Monellia costalis) - CALIFORNIA - Adults heavy on pecan in Riverside and Blythe areas of Riverside County, light in Fullerton, Orange County, and medium in Ontario, San Bernardino County. (Cal. Coop. Rpt.).

BLACK PECAN APHID (Melanocallis caryaefoliae) - CALIFORNIA - Adults light on pecan trees in Fullerton, Orange County. (Cal. Coop. Rpt.).

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - Adult taken in a trap in Burrell area of Santa Cruz County, for first record for this county. (Cal. Coop. Rpt.).

Citrus Insect Situation, Lake Alfred, Florida, Second Week in November - PURPLE SCALE activity was unchanged, with a downward trend expected in the next one or two weeks. FLORIDA RED SCALE activity declined in all districts, with decline expected to continue throughout the winter. CITRUS RED MITE showed a marked increase in activity with further increase expected. CITRUS RUST MITE activity showed a sharp rise on both leaves and fruit. This trend is expected to continue at least through November and will lead to high infestations for several weeks. (Fla. Coop. Sur.).

TRUCK CROP INSECTS

CABBAGE LOOPER (Trichoplusia ni) - LOUISIANA - Light to medium on cabbage in St. James and St. Landry Parishes. (Spink).

CROSS-STRIPED CABBAGEWORM (Evergestis rimosalis) - LOUISIANA - Light on cabbage in St. James Parish. (Spink).

IMPORTED CABBAGEWORM (Pieris rapae) - DELAWARE - Common on commercial cabbage plantings in Kent County. Mostly in younger and older plants at ends of rows. Also present in one large field of cauliflower. (Burbatis, Conrad).

A LOOPER (Rachiplusia ou) - TEXAS - Medium to heavy on carrots in Cameron County. (Getzin, Deer).

APHIDS - OKLAHOMA - Rhopalosiphum pseudobrassicae heavy on mustard greens in localized areas in Wagoner County. (VanCleave). SOUTH CAROLINA - Severe on turnips in Pendleton area of Anderson County. (Nettles).

SOUTHERN POTATO WIREWORM (Conoderus falli) - SOUTH CAROLINA - Highest weekly catch of 326 adults since first week in October at Charleston light trap on November 2. (Day, Cuthbert, Reid).

SLUGS - LOUISIANA - Numbers in mustard at La Place, St. John the Baptist Parish, sufficient to necessitate control. (Spink).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - SOUTH CAROLINA - Active colony detected November 5 in dying shortleaf pine near Clemson, Pickens County. This is the first evidence this season in this area due mainly to heavy winter kill of previous high populations. (Fox).

WHITE-PINE SAWFLY (Neodiprion pinetum) - SOUTH CAROLINA - Small but intense infestation in plantings of white pine near Clemson, Pickens County. Defoliation ranged light to complete. (Fox).

FALL CANKERWORM (Alsophila pomataria) - WISCONSIN - Noted in the Madison area, Dane County. (Wis. Coop. Sur.).

LESSER CANNA LEAF ROLLER (Geshna cannalis) - ALABAMA - Caused serious damage to leaves of cannas in Lee County. (Guyton).

PUSS CATERPILLAR (Megalopyge opercularis) - TEXAS - Light on shade trees and ornamentals in Hidalgo County. (Deer).

SCALE INSECTS - MARYLAND - Lepidosaphes ulmi heavy on chestnut at Poolesville, Montgomery County. (U. Md., Ent. Dept., Nov. 10). ALABAMA - Ceroplastes ceriferus heavy on blueberry bushes in Lee County. (Guyton). NORTH CAROLINA - Ceroplastes sp. taken occasionally on boxwood in Richmond County. (Lewis, Farrier).

A SPIDER MITE (Eotetranychus lewisi) - OREGON - Infested poinsettia in Clackamas and Multnomah Counties during October. Where not controlled, caused yellowing and speckling of foliage. Det. E. W. Baker. (Doucette). WASHINGTON - Moderate on poinsettia in several greenhouses in the Puget Sound area. Det. E. W. Baker. (Doucette).

INSECTS AFFECTING MAN AND ANIMALS

HORN FLY (Siphona irritans) - OKLAHOMA - Averaged up to 400 per head on some cattle in east central part of State. (VanCleave).

SCREW-WORM (Callitroga hominivorax) - CALIFORNIA - Heavy infestation occurred in cattle, sheep and hogs in the Ione area of Amador County. Animals being checked daily and treated. (Plaister).

ANTS - TEXAS - Solenopsis geminata annoying people in Harris County (Clinton) and Camponotus herculeanus pennsylvanicus in Colorado County. (Moore).

STORED-PRODUCT INSECTS

TOBACCO MOTH (Ephestia elutella) - VIRGINIA - Damaged cured tobacco on a Lunenburg County farm during October. Det. H. W. Capps. (Howell, Powers).

INDIAN-MEAL MOTH (Plodia interpunctella) - MARYLAND - Infested large bin of wheat at Centerville, Queen Annes County. (U. Md., Ent. Dept., Nov. 10).

CONFUSED FLOUR BEETLE (Tribolium confusum) - UTAH - Infesting stored barley and mill sweepings at Kingston, Piute County. (Knowlton, Buck).

FLAT GRAIN BEETLE (Laemophloeus pusillus) - OKLAHOMA - Averaged 150 per quart of stored oats in Wagoner and Payne Counties. (VanCleave).

GRANARY WEEVIL (Sitophilus granarius) - MARYLAND - Damaged wheat in large bin at Centerville, Queen Annes County. (U. Md., Ent. Dept., Nov. 10).

HIDE BEETLE (Dermestes maculatus) - ALABAMA - Larvae and adults common in feed rooms in Lee County. (Guyton).

BENEFICIAL INSECTS

PREDATORS - OKLAHOMA - Hippodamia convergens averaged 0.4-1.2 per sweep in some east central alfalfa fields, Nabis spp. 0.4-1 and lacewings 0.2-0.8. (Howell, VanCleave).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Ala. argil.	Helio. zea
FLORIDA							
Gainesville 11/5-12	1	1					2
Quincy 10/28-11/3	1						3
LOUISIANA							
Baton Rouge 11/7-13	103	111	3	3	138	106	7
Franklin 11/5, 10						13	
MISSISSIPPI							
*State College 11/8-14	38	25			1		38
SOUTH CAROLINA							
Charleston 11/10-16	26	58	1		6		
Florence 11/2-8	76	59	2	2	8		12

*Two traps - State College.

to Illinois. Below normal temperatures prevailed to the west of the Continental Divide. Most of the area showed departures of 3° to 9°. Weekly precipitation amounts through Sunday were under 1/2 inch over most of the Nation. Amounts exceeding 1 inch occurred from eastern Texas northeastward through the lower Great Lakes, from the Cascades to the Pacific coast, and at some Rocky Mountain stations. Mountain Home, Arkansas, measured 7.45 inches. (Summary supplied by U. S. Weather Bureau).

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

VIOLET LEAF MIDGE* (*Dasyneura affinis* (Kieffer))

Economic Importance: This pest causes serious damage to cultivated and wild violets in areas of Europe and Africa. Infestations have increased in Germany since 1950. They have reached about 30 percent in plantings near Berlin, where they may cause loss of flower production. Heavy infestations cause distortion and dwarfing and sometimes death of the plant. Living pupae were found in the leaves of a violet plant in the mails from England at Hoboken, New Jersey, in 1954.

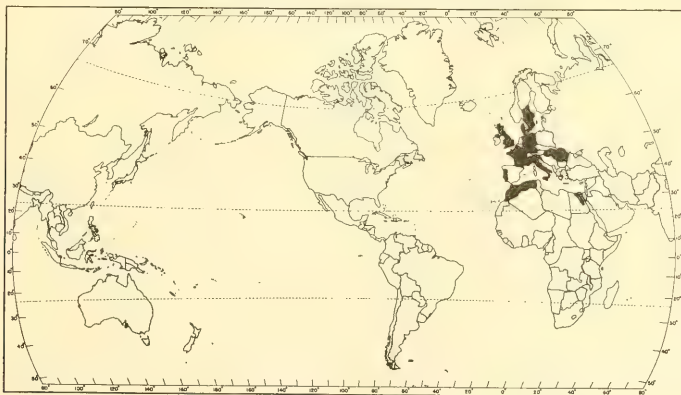


Damage to Violet

Distribution: Widely distributed throughout Europe, being recorded in Sweden, Denmark, Hungary, Italy, Rumania, France, Portugal, Great Britain and Germany. Also known to occur in Algeria, Morocco and Egypt in North Africa.

Hosts: Cultivated and wild *Viola*, including violets and pansies.

Life History and Habits: Females begin emerging from overwintering cocoons in the spring. They live from 3 days to one week and lay up to 98 eggs each. Eggs are laid in the leaf tissue along the margins of the older outer leaves or within the rolled edges of the younger leaves. Eggs laid in exposed dry positions die. Larvae hatch in 6 to 8 days at 68° F. and cause formation of hairy galls on the shoots and leaves. They feed gregariously inside the leaf, as many as 24 larvae being found in a single gall. There are generally 4 larval molts in France. The usual larval period lasts about 6 weeks except in the overwintering generation. The total larval period varies from a minimum of 27 days in the spring and summer to a maximum of about 7 months in the overwintering generation. The mature larva spins a cocoon within the gall, although it may spin a cocoon elsewhere if

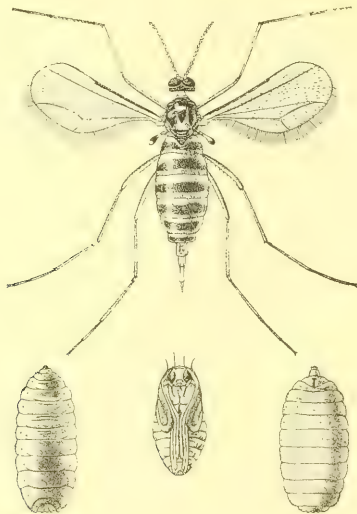


General Distribution of Violet Leaf Midge

* Also called Violet Leaf Rolling Gall Midge (Itonididae, Diptera).

necessary. Pupation takes place in the cocoons and lasts about 10-12 days. There are four generations a year in cooler climates and five in warmer climates. Temperatures of 68 to 86 degrees and a relative humidity of 80 to 95 percent are most favorable for development in Germany. Larval feeding causes the margins of leaves to curl upward, discolor and become malformed. Galls are recognizable about 8 to 11 days after the eggs are laid. Infested violets may be found year-round in Egypt.

Description: Adult small, yellowish with blackish markings on head and thorax. Antennae long, 15-segmented; two basal segments short and broad, following ones narrow, cylindrical in female, pyriform and ended by long neck in male; surface appears pubescent. Maxillary palpi 4-segmented. Wings smoky, with squamulae, mainly at anterior edge. Subcostal vein rather short. Legs long and thin; first tarsal segment very short, last provided with two bifid claws and thick empodium. Egg yellowish-white, cylindrical, both extremities rounded, about 0.25 mm. long and 0.5 mm wide. Larva 14-segmented. Color variable; hyaline whitish, pale yellowish and pale pinkish according to instars. Mature larva about 2 mm. Dorsally, head cone-shaped and with antennae; base swollen. Antenna with small basal swelling, tiny terminal papilla. Ventrally, the third segment with bifurcated sternal spatula, Y-shaped and situated mid-ventrally on thorax. Pupa with cephalic teeth used in opening cocoon or gall. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies and the U. S. N. M.) CEIR 8 (47) 11-21-58



Larva, Pupa and Adult

Figures (except map): Damage from Barnes, H. F. 1948. Gall Midges of Economic Importance. Vol. IV. Gall Midges of Ornamental Plants and Shrubs. 165 pp. London. Larva, pupa and adult from Zoheiry, M. S. El- 1944. Societe Fouad 1^{er} D'Entomologie Bul. 28:113-118.

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Cooperative
ECONOMIC INSECT
REPORT

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AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

PINK BOLLWORM heavier in Oklahoma than in any previous year. (p. 965).

Survey in Minnesota indicates possible increase in area of heavy FOREST TENT CATERPILLAR infestation in 1959. (p. 966). A PINE TIP MOTH severe throughout eastern part of Texas. (p. 966).

INSECT DETECTION: White-fringed beetles found for first time in Decatur County, Georgia. (p. 965). Pink bollworm reported for first time in 5 counties in Arkansas and in 2 parishes in Louisiana. (p. 965). Imported fire ant found for first time in one parish in Louisiana and 2 counties in Mississippi. (p. 969). A cucujid (Hemipeplus marginipennis) new to California. (p. 969).

HIGHLIGHTS OF INSECT OCCURRENCE - 1958, CANADA (p. 971).

The RICE DELPHACID, Sogata orizicola, and two closely related species. (p. 973). In the interest of the important rice disease "hoja blanca" and its only known vector, S. orizicola, an illustrative key for separating this species from two other species of Sogata that are known to occur in the United States has been prepared by the Insect Identification and Parasite Introduction Laboratories, ENT, ARS. Separates are available on request.

INSECTS not known to occur in the United States. (p. 975).

WEATHER OF THE WEEK ENDING NOVEMBER 24

The week, introduced by the first severe winter storm of the season, with its accompanying blizzard or near-blizzard conditions in the Plains States and adjacent areas, ended more pleasantly with generally light winds, seasonal temperatures and light precipitation which for the most part fell in the northern tier of States. Precipitation exceeded 2 inches in the coastal area of the Pacific Northwest, parts of the northern Rocky Mountain region, in a band from near Topeka, Kansas, to southern Wisconsin and in the vicinity of Cleveland, Ohio, where the 24-hour amount of 2.23 inches on the 18th and 19th exceeded the 15-year November record at Cleveland Airport. Less than $\frac{1}{2}$ inch fell over the greater share of the country and areas without measurable precipitation included southern California, most of Nevada and Arizona, south central Texas and continued in the East from parts of North Carolina to western Florida.

Temperatures averaged above normal east of the Plains States with departures of 6° or more in most sections. Weekly averages were 9° above normal in the lower Ohio Valley and parts of the Great Lakes and Northeast. Elsewhere, temperatures averaged from near normal to about 6° below normal, with most of the greatest departures in the Central and Southern Plateau region and averages for the week ranged down to 9° below normal at some stations in the Great Basin. On Monday, the 17th, the weather cleared over the Far West and temperatures fell to unseasonably low levels with numerous below zero readings from Montana to Utah. Tuesday, the cold weather continued southward and Flagstaff and Tucson, Arizona, reported new record November low temperatures of -13° and 24°. Early in the week record or near-record heat was experienced at many places in the East, from the Atlantic to the lower Mississippi and lower Great Lakes. On Wednesday, Buffalo, New York, had a record 74° for so late in the season; however, quite a change occurred as the cold front pushed by in the afternoon. This cold air, by the week end, brought considerably cooler weather to northern Florida.

The severe storm with moderate to heavy snow in the Rocky Mountains and northwestern Great Plains at the end of the previous week, deposited a heavy mantle of snow at the beginning of this week in North Dakota and northern Minnesota. High winds set new records at Minneapolis and Duluth, Minnesota, and were responsible for many injuries in that State and considerable property damage from eastern North Dakota to Michigan. Several Minnesota counties along the north shore of Lake Michigan were declared disaster areas. (Summary supplied by the U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - WISCONSIN - A total of 15,224 acres were treated for grasshopper control in the State. Estimated loss from grasshoppers was \$178,500, while estimated savings from control were \$345,000. (PPC, Cent. Reg., Oct. Rpt.).

SORGHUM MIDGE (Contarinia sorghicola) - OKLAHOMA - Overwintering larvae found in sample taken from heads of grain sorghum from a field at Stillwater; infestation 12.2 percent. (Bryan).

APPLE GRAIN APHID (Rhopalosiphum fitchii) - OKLAHOMA - Averaged 0-25 per linear foot in some fall seeded wheat fields in northeastern area. (VanCleave, Campbell).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Averaged 0-25 per linear foot in some fields of fall seeded barley in northeastern area. (VanCleave, Campbell). TEXAS - Light on barley in Comanche County. (Hawkins).

GREENBUG (Toxoptera graminum) - OKLAHOMA - All instars found, including winged adults, in fall seeded small grain fields in Ottawa, Delaware, Craig, Mayes, Wagoner, Rogers, Nowata, Washington, Tulsa, Osage, Pawnee, Kay, Noble, Payne and Logan Counties in northeastern area. Populations averaged up to 50-75 per linear foot in some localities; higher in clumps of volunteer plants. Total of 75 fields surveyed. (VanCleave, Campbell). TEXAS - Light on wheat in Deaf County (Thomas) and in Potter and Oldham Counties. (Daniels, Hawkins).

CHINCH BUG (Blissus leucopterus) - WISCONSIN - Survey in southern and some northwestern counties gave negative results. (Wis. Coop. Sur.).

ALFALFA WEEVIL (Hypera postica) - DELAWARE - Adults common in alfalfa and clovers in New Castle and Kent Counties with a few larvae being found in alfalfa. (Burbutis, Conrad).

CLOVER ROOT CURCULIO (Sitona hispidula) - OREGON - Caused more damage to first-seed-crop-year alsike clover in Klamath County than any year during the observation period 1953 through 1958. (Dickason). DELAWARE - Adults unusually common in clovers and alfalfa in New Castle and Kent Counties. (Burbutis, Conrad).

PEA APHID (Macrosiphum pisi) - OKLAHOMA - Averaged 5 per 25 sweeps in some alfalfa fields in northeastern area. (VanCleave). KANSAS - Averaged 25 per sweep on alfalfa in Cherokee County. (Peters).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Averaged 0-5 per sweep in some alfalfa fields in northeastern area (VanCleave) and 1.8-2.0 per sweep in field of alfalfa in Tillman County (Hatfield). VIRGINIA - Very heavy in 2 fields of seedling alfalfa and in one field of old alfalfa in Franklin County. One field of seedling alfalfa was so far gone that it was judged best to abandon it and re-seed in the spring of 1959. (Bishop, Tucker, Morris). TEXAS - Medium to heavy on alfalfa in Hunt County. (Davis). KANSAS - Averaged 10 per sweep on alfalfa in Cherokee County. (Peters).

GREEN JUNE BEETLE (Cotinis nitida) - NORTH CAROLINA - Larvae infesting lawn in Macon County. (Fagg, Farrier). MARYLAND - Larvae making holes in lawns in Towson. (U. Md., Ent. Dept.).

RHODES-GRASS SCALE (Antonina graminis) - TEXAS - Damaged St. Augustine grass in Hunt County. (Wheelless).

SOYBEAN CYST NEMATODE (Heterodera glycines) - MISSOURI - One new infested property was found near Portageville in Pemiscott County. KENTUCKY - A positive determination was made from a soil sample collected from a farm located near Hickman in Fulton County. (PPC, Cent. Reg., Oct. Rpt.). NORTH CAROLINA - An infestation was found in Gates County, about one-tenth of a mile south of the Virginia State line. Infestations were confirmed on 2 properties involving 13 acres. Three additional properties were found infested in each of Pender and Pasquotank Counties. (PPC, So. Reg., Oct. Rpt.).

FRUIT INSECTS

LESSER PEACH TREE BORER (Synanthedon pictipes) - ALABAMA - Moderate to heavy on Escambia County peach trees. (Grimes, Blake).

PEACH TREE BORER (Sanninoidea exitiosa) - ALABAMA - Moderate to heavy on peach trees in Escambia County. (Grimes, Blake).

APPLE APHID (Aphis pomi) - NORTH CAROLINA - Infesting apple trees in Rowan County. (Satterwhite, Smith).

HICKORY SHUCKWORM (Laspeyresia caryana) - TEXAS - Caused light damage to pecans in Dickens County. (Conner).

NAVEL ORANGEWORM (Paramyelois transitella) - CALIFORNIA - Medium in walnuts in Bakersfield, Kern County, and light on oranges in Otay, San Diego County. (Cal. Coop. Rpt.).

A TWIG GIRDLER - TEXAS - Damaged pecans in Anderson County. (Hooper).

CALIFORNIA RED SCALE (Aonidiella aurantii) - CALIFORNIA - Heavy on tangerine trees in Bakersfield, Kern County, and on lemon trees in Orland, Glenn County. (Cal. Coop. Rpt.).

OBSCURE SCALE (Chrysomphalus obscurus) - TEXAS - Damaged pecan trees in Wharton County. (Ragen).

WHITE PEACH SCALE (Pseudaulacaspis pentagona) - ALABAMA - Peach orchard of over 500 trees in Escambia County has heaviest infestation of this scale observed in 1958 and continues to present a problem. (Grimes).

YELLOW SCALE (Aonidiella citrina) - CALIFORNIA - Heavy on citrus in Orland, Glenn County, and on a lemon tree in Red Bluff, Tehama County. (Cal. Coop. Rpt.).

CITRUS BLACKFLY (Aleurocanthus woglumi) - MEXICO - Inspection of 50,641 trees on 1,965 properties in the States of Sonora, Nuevo Leon and Tamaulipas revealed 15 trees infested on 8 properties. (PPC, Mex. Reg., Oct. Rpt.).

TRUCK CROP INSECTS

PICKLEWORM (Diaphania nitidalis) - ALABAMA - Moderate on squash in Escambia County. (Grimes, Blake).

APHIDS - OKLAHOMA - Severe infestations, probably Myzus persicae, on spinach in Arkansas River Valley between Haskell and Sequoyah Counties. (Washum).

CABBAGE APHID (Brevicoryne brassicae) - ALABAMA - Numerous on broccoli, rape and collards in Lee County. (Guyton). CALIFORNIA - Numerous in untreated fields. (Campbell).

POPLAR PETIOLE GALL APHID (Pemphigus populi-transversus) - ALABAMA - Severe on roots of turnips in Escambia and Baldwin Counties. (Grimes, Blake).

TURNIP APHID (Rhopalosiphum pseudobrassicae) - OKLAHOMA - Heavy infestation on turnips in gardens in Payne, Logan, Lincoln and Osage Counties. (Howell). Killing turnips in Marshall County. (Vick). ALABAMA - Heavy on leaves of turnips in Escambia and Baldwin Counties (Grimes, Blake) and heavy on turnips in Lee County. (Guyton).

SOUTHERN GREEN STINK BUG (Nezara viridula) - ALABAMA - Moderate numbers on turnips in Baldwin County. Few egg masses found. (Grimes, Blake).

VEGETABLE WEEVIL (Listroderes costirostris obliquus) - ALABAMA - Larvae caused severe damage to turnips and mustard in Lee County. (Guyton).

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - Surveys in the program States revealed 73 new infestations in 16 counties and parishes. The heaviest outbreak occurred in Caddo Parish, LOUISIANA, north of Shreveport near Blanchard, where 21 infestations were found. No new counties or parishes were found infested. (PPC, So. Reg., Oct. Rpt.).

WHITE-FRINGED BEETLES (Graphognathus spp.) - GEORGIA - Decatur County was found infested for the first time. An infestation on about 600 acres in northwestern Erwin County, although not new, was very heavy and caused severe damage to approximately 30 acres of sweetpotatoes. ALABAMA - Inspections in 14 counties were generally negative, except for locations in Chilton and Jefferson Counties. Eradication treatments of the Madison County infestation were progressing very satisfactorily. MISSISSIPPI - Surveys extended the infested areas in Marion and Walthall Counties. One extension was also found east of the known infested area at Bay Springs, Jasper County. FLORIDA - Inspections in 8 counties revealed no new infestations. Eradication work was carried out in 5 other counties. SOUTH CAROLINA - An additional 538 infested acres were found in the Myrtle Beach infestation. NORTH CAROLINA - Surveys in 17 counties revealed extensions in 6 counties totalling 403 acres. TENNESSEE - Additional infested acreage was found in the city of Memphis and also in the cities of Paris in Henry County and Lexington in Henderson County. (PPC, So. Reg., Oct. Rpt.).

POTATO LEAFHOPPER (Empoasca fabae) - CALIFORNIA - Heavy on string beans in Spring Valley, San Diego County. (Cal. Coop. Rpt.).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - ARKANSAS - Found for the first time in Ashley, Clay, Drew, Faulkner and White Counties, outside the regulated area. Specimens also recovered from Little River, Howard, Hempstead, Miller, Lafayette, Columbia, Clark and Crawford Counties. LOUISIANA - Larvae were found in 4 parishes outside the regulated area, Union and Lincoln Parishes had previously been infested, but Rapides and Grant Parishes were infested for the first time. OKLAHOMA - Inspections of gin trash, lint cleaners and gin stands revealed infestations in 18 counties and that infestations are heavier for 1958 than in any previous year. TEXAS - Inspection of 591 bushels of gin trash in 26 central and eastern counties resulted in finding 83,844 larvae, or an average of 141.75 per bushel, compared with 16.49 per bushel for 1957. The 1958 infestation,

percentage wise, is therefore about eight and one-half times heavier than in 1957. MISSISSIPPI - An intensive inspection program in the main cotton producing counties has been negative to date. (PPC, So. Reg., Oct. Rpt.). MEXICO - Infestation has built up in the La Laguna region of Coahuila and Durango and in the Delicias zone of Chihuahua. In the La Laguna region it has been estimated that losses will run 10-15 percent. In Chihuahua, 30 lint cleaner inspections revealed 689 larvae at 7 of 14 locations, with 83 larvae found in 100 green bolls in one location. A total of 24 lint cleaner inspections in Durango recorded 558 larvae at the 13 locations inspected. In Coahuila, 18 lint cleaner inspections at 12 locations showed all infested with a total of 324 larvae. (PPC, Mex. Reg., Oct. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

BLACK TURPENTINE BEETLE (*Dendroctonus terebrans*) - ARKANSAS - Some infestations remained active in central portion of State. (Ark. For. Pest Rpt., Nov.).

SOUTHERN PINE BEETLE (*Dendroctonus frontalis*) - TEXAS - No known active brood trees. Aerial and ground observations continued. (Young).

IPS BEETLES (*Ips* spp.) - TEXAS - Considerable pine mortality reported in Trinity County. (Young). CALIFORNIA - *I. plastographus* heavy on Monterey pines at Watsonville, Santa Cruz County. (Cal. Coop. Rpt.).

PINE BARK WEEVILS - ARKANSAS - Killed advanced pine reproduction in crop cut areas, but did not attack young seedlings. This infestation is near the Clarke-Pike County border in the same area in which weevils were active in the spring of 1958. (Ark. For. Pest Rpt., Nov.).

FOREST TENT CATERPILLAR (*Malacosma disstria*) - MINNESOTA - Egg mass survey indicates possible increase in area of heavy defoliation in St. Louis County north of Duluth for 1959. Counts averaged 10.5 egg masses per tree in 21 plots over the entire area, with as high as 28 egg masses per tree in some plots. Complete defoliation can be expected with 10 egg masses per tree. (Minn. Ins. Rpt., Nov. 17).

ORANGE-STRIPED OAKWORM (*Anisota senatoria*) - TEXAS - Caused defoliation of red and white oaks in Burleson, Hardin, Jasper, Newton, Polk and Tyler Counties. (Young).

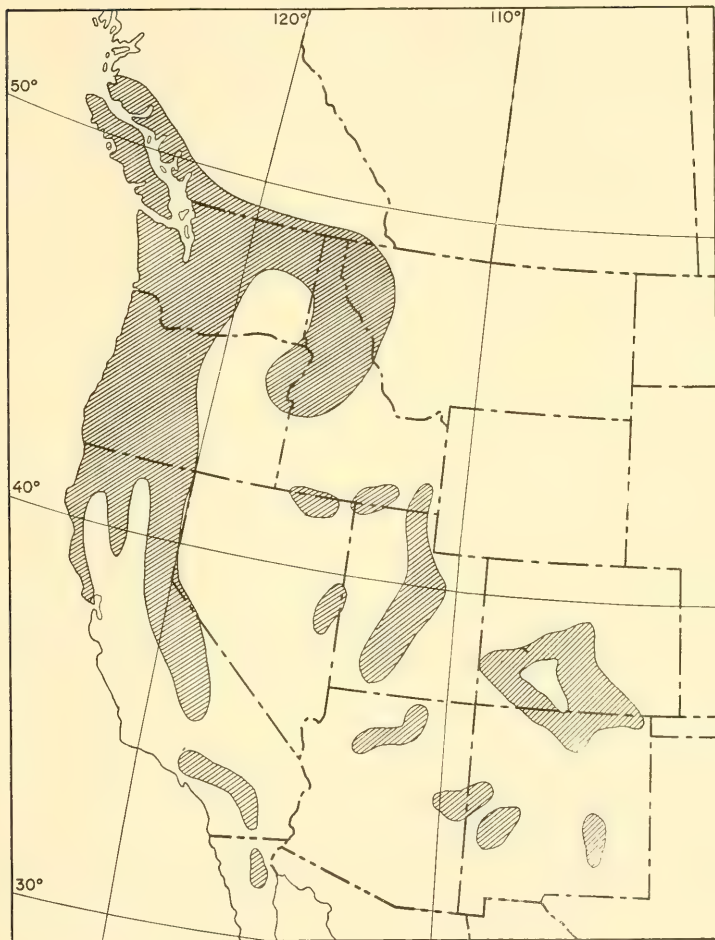
A PINE TIP MOTH - TEXAS - Severe infestation reported throughout eastern part of the State. (young).

PINE WEBWORM (*Tetralopha robustella*) - ARKANSAS - Appeared locally in scattered areas over the State. No serious feeding damage reported. (Ark. For. Pest Rpt., Nov.).

A SAWFLY - TEXAS - Caused partial defoliation of pine and hardwoods in Tyler, Hardin and Polk Counties. An area estimated at 100 acres east of Honey Island seriously infested. (Young).

APHIDS - UTAH - Extremely numerous on rose and some spirea in areas of Cache County. (Knowlton). OKLAHOMA - *Rhopalosiphum rufomaculatum* found on chrysanthemum at Lawton and Comanche. (Hatfield). CALIFORNIA - Populations of *Eriosoma americanum* high on elms in Woodland, Yolo County. (Cal. Coop. Rpt.).

DISTRIBUTION OF FIR ENGRAVER (*Scolytus ventralis*)
in Western North America



A LEAF ROLLER - TEXAS - Caused damage to ornamentals in Cameron County. (Richardson).

SCALE INSECTS - ALABAMA - Heavy infestation of all stages of Fiorinia theae on camellia and burford holly in Lee County. (Guyton). VIRGINIA - Unaspis euonymi heavy on euonymus plants in Amelia County and in Reedville, Northumberland County. (Rowell, Wilson, Gruenhagen). SOUTH CAROLINA - An unidentified species of wax scale severe on camellia, privet and boxwood in Abbeville County. (Nettles, et al.). TEXAS - Icerya purchasi light on nandina plants in Panola County. (McKay). CALIFORNIA - Saissetia hemisphaerica heavy on eugenia in Watsonville, Santa Cruz County. Coccus hesperidum heavy on Palo Verde trees in Torrey Pine area, San Diego County, and light on rose-of-sharon in Fortuna, Humboldt County. (Cal. Coop. Rpt.).

ROSE LEAFHOPPER (Edwardsiana rosae) - UTAH - Remaining later than usual on rose and spirea in Cache, Box Elder and Salt Lake Counties. (Knowlton, Nov. 15).

WHITEFLIES - UTAH - Adults numerous on some spirea and black raspberry foliage at Logan, Cache County. (Knowlton, Nov. 15). CALIFORNIA - Pealius kelloggi heavy on Catalina cherry trees in Carlsbad, San Diego County. (Cal. Coop. Rpt.).

A NOTODONTID (Datana sp.) - CALIFORNIA - Heavy on sumac in San Diego, San Diego County. (Cal. Coop. Rpt.).

INSECTS AFFECTING MAN AND ANIMALS

SCREW-WORM (Callitroga hominivorax) - OKLAHOMA - Active in Custer County during last 10 days. (Hutton).

CATTLE GRUBS (Hypoderma spp.) - TEXAS - H. lineatum beginning to appear in backs of cattle in Kerr County. (Blume). CALIFORNIA - An unusually long season reported for H. bovis and H. lineatum with heavy infestations from August through early November in Calabasas and Agoura areas of Los Angeles County. (L. A. Co. Ext. Ser.).

WINTER TICK (Dermacentor albipictus) - OKLAHOMA - Found up to 4 per square inch on necks and heads of small cattle in Pushmataha and McCurtain Counties. (Goin). CALIFORNIA - Infesting deer in Altura area, Modoc County. (Cal. Coop. Rpt.).

SALT-MARSH MOSQUITO (Aedes sollicitans) - NORTH CAROLINA - Continues abundant throughout coastal area. (Usry).

STORED-PRODUCT INSECTS

KHAPRA BEETLE (Trogoderma granarium) - MEXICO - Surveys were made in Mexicali and Tecate, Baja California, and Guadalajara, Jalisco, with a total of 237 property inspections being made. No positive determinations were made. All known infested sites have been treated except 5 properties involving approximately 6,400,000 cubic feet in Guadalajara, Jalisco. (PPC, Mex. Reg., Oct. Rpt.).

DARK MEALWORM (Tenebrio obscurus) - ALABAMA - Numerous in feed rooms in Lee County. (Guyton).

INDIAN-MEAL MOTH (Plodia interpunctella) - TEXAS - Heavy on the outside of bins containing over 7,000 bushels of sorghum in Brazos County. (Randolph). CALIFORNIA - Medium in walnuts in Santa Clara, Santa Clara County. (Cal. Coop. Rpt.).

EUROPEAN EARWIG (Forficula auricularia) - CALIFORNIA - Heavy infestation in fish meal in Salinas, Monterey County. (Cal. Coop. Rpt.).

Stored-grain Insects in Nebraska - Insects recovered from 256 samples of wheat taken from CCC bins during October, 1958, in 22 counties were predominately granary weevil, Cadelle, saw-toothed grain beetle, flat grain beetle and dermestids. In addition, flour beetles (Tribolium spp.), spider beetles, a fungus beetle (Typhaea stercorea) and Indian-meal moth were also collected. Live or dead insects were found in 73 percent of the bins examined; a number of these bins being recently fumigated. Live insects were taken in 17.2 percent of the bins. (Kantack).

BENEFICIAL INSECTS

CONVERGENT LADY BEETLE (Hippodamia convergens) - OKLAHOMA - Counts in alfalfa averaged 0.1-0.3 per sweep in some fields in northeastern area and 0.3-0.5 per sweep in Tillman County. (VanCleave, Hatfield).

MISCELLANEOUS INSECTS

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - LOUISIANA - Found for first time in West Carroll Parish, bringing total number of infested parishes to 44. Treatment was applied to 467 acres in 11 parishes. MISSISSIPPI - Found for the first time in Adams and Choctaw Counties. Treatment was applied to 3,486 acres, mostly in the eradication zones of Amite, Jefferson Davis and Wilkinson Counties. SOUTH CAROLINA - Treatment of all known infestations was completed during October. NORTH CAROLINA - Two additional isolated infestations in Robeson County were treated. FLORIDA - Treatment was applied to more than 5,000 acres bringing the total to 29,300 acres. GEORGIA - About 2,000 acres were treated in several counties. TEXAS - Control was applied to 170 acres in Bexar, Hardin and Harris Counties. (PPC, So. Reg., Oct. Rpt.).

JAPANESE BEETLE (Popillia japonica) - ILLINOIS - Two live beetles were found in traps in the Sheldon area, October 10. Two additional beetles were caught October 24 in traps at East Peoria, a new location for the 1958 season, bringing the total to 5 for this area. The infestation in the Peoria area appears to be wider spread than first indicated. (PPC, Cent. Reg., Oct. Rpt.). TENNESSEE - Treatment was applied to 1,437 acres in 6 eastern counties. NORTH CAROLINA - Twenty-three acres were treated at Spencer, Rowan County, and treatment in this section is expected to be completed early in November. Regulatory treatment was applied to 6 acres of nurseryland in the State. SOUTH CAROLINA - A half-acre of nurseryland was treated. (PPC, So. Reg., Oct. Rpt.).

A CUCUJID (Hemipeplus marginipennis) - CALIFORNIA - Specimens taken in Watsonville area of Santa Cruz County in July 1958. This is a first record for the State. Det. T. J. Spilman. (Cal. Coop. Rpt.).

OLD-HOUSE BORER (Hylotrupes bajulus) - VIRGINIA - Present in subflooring, large timber in basement and in attic of a 3-year old house in New Castle, Craig County. (Rowell). MARYLAND - Infesting joists in a home in Baltimore. (U. Md., Ent. Dept.).

A SUBTERRANEAN TERMITE - UTAH - Caused extensive damage to a home and garage at Logan. (Knowlton).

MILLIPEDES - VIRGINIA - Large numbers in a home and on porch and grounds of the house in Madison County; inside several homes and on patios and surroundings of homes in Culpeper County; and in basement entrance of home in Blacksburg. (Rowell, McLearen, Heltzel). Also in the kitchen of a home in Nelson County. (Morris, Swain). MARYLAND - Troublesome to homeowners in Prince Georges, Carroll and Montgomery Counties. (U. Md., Ent. Dept.).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Ala. argil.	Helio. zea
FLORIDA							
Gainesville 11/12-18		2					
Quincy 11/5-11		8					1
MISSISSIPPI							
*State College 11/15-21	134	42	3	2	3		15
NEBRASKA							
Lincoln 10/17-27	64	98	21	5	17		505
North Platte	217	419		76	1		16
10/31-11/16							
SOUTH CAROLINA							
Charleston 11/17-23	11	42	9		8		5
TENNESSEE (Counties)							
Blount 11/4-10				1		1	
Cumberland 11/4-10	15	49	1				5
Johnson 11/4-10	9	4	2	2	4		6
Madison 11/4-10	3	4	4	2		1	14
Maury 11/4-10	25	9	1		2		29
Robertson 11/4-10	21	26		1	4		53

*Two traps - State College.

HIGHLIGHTS OF INSECT OCCURRENCE - 1958

CANADA

Prepared by C. G. MacNay

Weather factors affecting development of insects in Canada in 1958 included unusually high temperatures in British Columbia, drought in the southern prairie region, especially in Saskatchewan, and low early-summer temperatures associated with high precipitation in much of Eastern Canada. Few insect pests caused unusual damage; grasshoppers continued to increase in Western Canada and other outbreaks of note involved variegated and red-backed cutworms, beet webworm, diamondback moth, seed-corn maggot, aphids and root maggots.

The trend of increase in GRASSHOPPER populations that occurred in the interior of British Columbia and in the Prairie Provinces in 1957 continued in 1958. The area involved, although appreciable, was still far less than that affected by the 1945-1950 outbreak. In extreme southern Alberta, the only area of the Province affected, infestations were light and losses were minimized by timely rains and excellent growing conditions. In south central and southeastern agricultural areas of Saskatchewan and in southwestern agricultural areas of Manitoba, large numbers of grasshoppers moved into field crops because of drought; severe damage was common in pastures, hay crops, alfalfa and crops sown on stubble. However, an efficient control campaign and desiccation of eggs combined to restrict losses. A survey of adults in August indicated a marked increase in numbers in Saskatchewan south of Saskatoon and in southwestern agricultural areas of Manitoba.

In British Columbia the most severe outbreak of VARIEGATED CUTWORM (Peridroma margaritosa) in many years caused much damage in the Vancouver delta and the lower Fraser Valley. Severe local infestations of PALE WESTERN CUTWORM (Agrotis orthogonia) occurred on flax and grain in the Lethbridge and Picture Butte areas of Alberta, and in west central agricultural areas of Saskatchewan. RED-BACKED CUTWORM (Euxoa ochrogaster) caused severe damage to cereal, rapeseed, flax and garden crops in western Alberta. It occurred also in large numbers throughout parkland areas, including the Peace River district, and in prairie areas as far as Craik and Stalwart in Saskatchewan. The infestation was the most severe and widespread in at least 30 years. In Saskatchewan, damage was severe in the northern agricultural areas and in central and east central agricultural regions, ranging up to 100 percent in crops seeded on fallow and on rape and pea stubble. In central agricultural areas of Manitoba, cutworm damage was severe, notably by ARMYWORM (Pseudaletia unipuncta) near Pilot Mound and Portage La Prairie. In Kent County, Ontario, BLACK CUTWORM (Agrotis ypsilon) fed heavily on tobacco and sugar beets for an unusually long period. In Ontario and Quebec, CUTWORMS caused extensive damage in gardens. ARMYWORM damaged hay and grain in New Brunswick, fruit and vegetables in Nova Scotia and grain in Prince Edward Island. In Newfoundland, BRONZED CUTWORM (Nephelodes emmedonia) occurred in unusual numbers in the St. John's area.

WIREWORMS caused relatively little damage in Alberta and Manitoba, but in Saskatchewan damage in southern and western agricultural areas was more extensive than in recent years, reseeding being necessary in many fields.

BET WEBWORM (Loxostege sticticalis) occurred in the Prairie Provinces in the most severe and widespread outbreak in 25 years, extensively damaging sugar beets, flax, rape, mustard, safflower and garden crops. Nearly all of the 37,000 acres of sugar beets in southern Alberta were infested, 1,200 acres being defoliated. In Saskatchewan, the northeastern and southeastern agricultural areas were most affected and in Manitoba, the southwestern area.

In Alberta and Saskatchewan, abnormal numbers of larvae of DIAMONDBACK MOTH (Plutella maculipennis) damaged mustard, rape and other plants. In southwestern Ontario, the heaviest infestation of APHIDS in many years occurred on wheat, oats, clover, peas, tobacco, potatoes and garden crops; many virus diseases were more common than usual in the area. Peas in Manitoba and peas, corn and oats in New Brunswick were also heavily infested. ALFALFA WEEVIL (Hypera postica) increased greatly in numbers in Alberta and Saskatchewan. In west central agricultural areas of Saskatchewan, FLAX BOLLWORM (Heliothis ononis) was unusually numerous. SIX-SPOTTED LEAFHOPPER (Macrostelus fascifrons) was much less injurious than in 1957 in Western Canada, but in southwestern Ontario it was numerous in grain. In the latter area, damage to tobacco seedlings by SEED-CORN MAGGOT (Hylemya cilicrura) was the worst on record. In Alberta and Saskatchewan, large numbers of Apantesis sp. damaged pastures, and in Newfoundland a TORTRICID (Cnephasia virgaureana), first recorded in 1952, severely damaged red clover and fed on cabbage, peas and ornamentals.

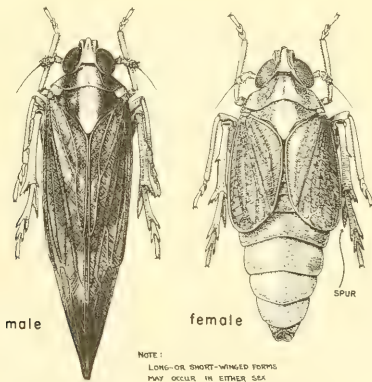
Garden crops, too, were attacked by numerous pests. SIX-SPOTTED LEAFHOPPER spread yellows virus extensively in celery, carrot and lettuce in southern Ontario. In Eastern Canada, where plant growth was generally slow, ROOT MAGGOTS severely damaged crucifers. In the Ottawa Valley, the largest population of DIAMONDBACK MOTH in 10 years and large numbers of a FLEA BEETLE (Phyllotreta cruciferae), not previously recorded in Canada, attacked cruciferous crops. PAINTED-LADY (Vanessa cardui), unusually numerous on Canada thistle in British Columbia, Alberta and Ontario, caused some damage also to sunflower and to soybeans. APHIDS heavily infested crucifers in Ontario and potatoes in the Maritime Provinces. In southwestern Ontario, second-generation larvae of ONION MAGGOT (Hylemya antiqua) damaged onions ready for harvest, for the first time on record. POTATO STEM BORER (Hydroecia micacea) severely infested potatoes and rhubarb in Nova Scotia. SLUGS were very injurious to vegetables in Ontario and Quebec and BROAD MITE (Hemitarsonemus latus) damaged greenhouse cucumbers at Leamington, Ontario.

Fruit insects of importance included CODLING MOTH (Carpocapsa pomonella) in the Okanagan Valley, British Columbia, where special control measures were necessary because of the unusually early development. In Nova Scotia, however, the overwintered population was the smallest in 5 years. Two first records of pests on strawberry in Canada involved OMNIVOROUS LEAF TIER (Cnephasia longana), identified from larvae found in fruit grown in the lower Fraser Valley, British Columbia, in 1957 and 1958; and CURLED ROSE SAWFLY (Allantus cinctus), feeding on foliage in southern Vancouver Island. BRAMBLE LEAFHOPPER (Ribautiana tenerrima) was found to overwinter as an adult at Victoria, British Columbia. In the Niagara Peninsula, Ontario, EUROPEAN FRUIT LECANIUM (Lecanium corni) was more abundant than usual on fruit trees, and APPLE MAGGOT (Rhagoletis pomonella) on prune. In Nova Scotia, CANKERWORMS and WINTER MOTH (Operophtera brumata) extensively damaged apple and a continued increase in parasitism of EYE-SPOTTED BUD MOTH (Spilonota ocellana) was associated with a modified spray program. In Newfoundland, PEAR LEAF BLISTER MITE (Eriophyes pyri) was recorded for the first time in the Province.

The Rice Delphacid, *Sogata orizicola* Muir, and Two Closely Related Species
(Homoptera: Fulgoroidea: Delphacidae)

The rice delphacid, *Sogata orizicola* Muir, is, as far as known, the sole vector of a virus disease of rice which has been called "hoja blanca". This disease was first observed in the Western Hemisphere about 1954, and in the United States in September, 1957, at Belle Glade, Florida. An additional infection was found in September, 1958, at Bay Saint Louis, Mississippi. The disease is not prevalent in the major rice-producing areas of the Orient, although an apparently similar infection of rice is known in Japan. Symptoms of the disease include yellowish-white discoloration or streaking of the leaves and affected plants often fail to head. Yields of rice in infected fields are often reduced 25 to 50 percent and the disease is capable of completely ruining the crop, particularly late plantings. The estimated loss to the rice crop in Cuba in 1956 was 25 percent. The insect has been recorded in Argentina, Colombia, Venezuela, Costa Rica, British Guiana and Cuba, in addition to the United States. First records in this country are September 14, 1957, at Belle Glade, Florida, and September 3, 1958, at Bay Saint Louis, Mississippi.

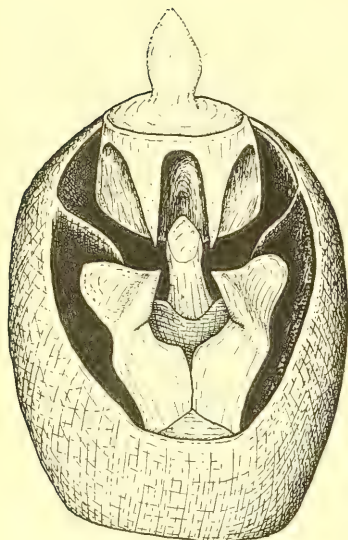
The preferred survey procedure for *S. orizicola* consists of sweeping of cultivated and volunteer rice, not overlooking small patches that may be present at the margin of fields. General sweepings of other grasses do not appear to be very satisfactory for collecting *S. orizicola*; however, *S. fucifera* (Horvath) may be abundant.



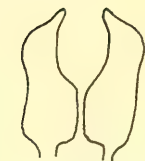
SOGATA ORIZICOLA

The non-specialist can recognize the family and more important members of the genus by the characters illustrated in the accompanying habitus drawings. The following points should be noted:

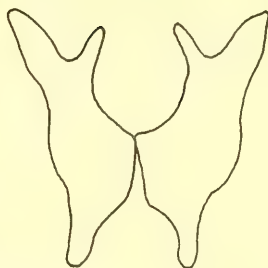
1. The family Delphacidae is easily distinguished from all other Homoptera by the movable spur at the apex of the hind tibia.
2. The genus *Sogata* is made up of small and slender species which have/are:
 - (1) 3.5-4 mm. in length in the long-winged form; slightly over 3 mm. in the short-winged form. Note - most specimens of both sexes will have long wings.
 - (2) a pale-yellow stripe running down the center of the dorsum of the head and thorax.
 - (3) males dark-brown with smoky-colored wings that are darker at the apex.
 - (4) females usually with a uniform yellowish to tan color.



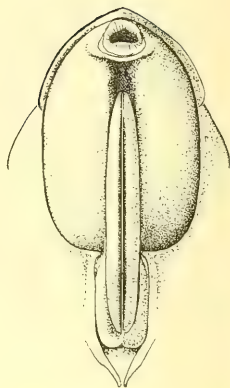
ORIZICOLA
male genitalia



CUBANA
styles only



FURCIFERA
styles only



female genitalia

Identification to species in the genus Sogata is based on characters found in the structures of the male genitalia and particularly in the styles which have characteristic outlines for each species. The styles are observed best when the genital capsule is studied in a direct posterior view. The styles will be seen as paired structures and are the most obvious components of the genitalia. Accompanied by the drawings, the following notes should allow recognition of the species treated here:

- (1) Sogata orizicola Muir. Apex of style broad with inner margins rather pointed and with a marked carina. See drawing. This rice pest is known in the United States only from Florida and Mississippi.
- (2) Sogata furcifera (Horvath). Apex of style with deep cleft giving a "mitten-like" outline. See drawing. A very common species found throughout southern United States.
- (3) Sogata cubana (Crawford). Apex of style small, comparatively slender and gently curved inward. See drawing. Known in United States only in Florida.

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

PHILIPPINE COTTON BOLL WEEVIL (Amorphaidea lata Motschulsky)

Economic Importance: Though cotton is of little economic importance in the Philippines, at the present time, this weevil is considered to be its most important pest and is prevalent wherever the crop is grown. The greatest injury is caused by the larvae; a large percentage of infested bolls drop. Adults in some instances may destroy flowers and very young bolls. Because of the exceedingly short life-history of the species, larval introduction through seeds into the United States is not expected, but the adults could be contained in plants, soil, seeds or raw cotton. Larval damage is similar to that caused by Anthonomus grandis except that the larvae of A. lata are almost always found in the ovary of the flower rather than in the square as is the case with A. grandis. Three additional species of Amorphaidea have been recorded as pests of cotton in Asiatic countries. They are A. arcuata in India, A. pectoralis in Java and A. rufa in Indochina.

Distribution: Philippine Islands (Manila, Laguna, Batangas, Mindoro, Ilocos Norte, Rombolon, Mindanao, Palawan and possibly other Provinces).

Hosts: All cultivated and wild varieties of cotton and Thespesia lampas.

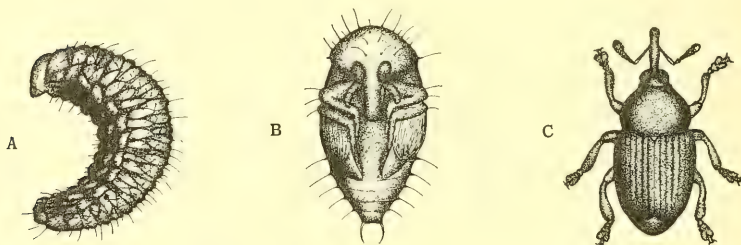
Life History and Habits: The adults become most noticeable during mid-morning, entering the flowers of host plants. Copulation takes place in the flowers and eggs are laid shortly thereafter, in cavities in the tissue of the base of the staminal sheath. Several eggs may be deposited in each flower. Eggs hatch in



Egg (greatly enlarged)
Located at Base of Staminal
Sheath of Cotton Flower

1 to 3 days and larvae begin feeding in the ovules and other soft parts of the square. As many as 9 larvae have been found in each boll after it has fallen to the ground. Larval development takes from 5 to 11 days, of which about half is spent as a resting stage in the soil. When larvae are in their feeding stage, they may completely destroy one or more of the ovules. In most cases the fruit drops to the ground before maturing. Sometimes undersized adults develop due to curtailed food supply, but normally larvae will die before maturity if the food supply is not adequate. Pupation takes place in the soil, about 10 to 20 mm. deep, and lasts from 3 to 5 days. The total life-cycle varies from 11 to 23 days, averaging 17 days. Adult hibernation occurs from June to October in the Philippines since no host plants are in bloom during that period.

Description: Adults are largely dark brown, 3-4 mm. long and about 1.2 mm. wide. Head minutely and shallowly pitted, sparsely pubescent; eyes lateral, convex and nearly circular. Rostrum about as long as prothorax, sides parallel. Antennae arising from middle of rostrum in female, beyond or in front of middle in male, elbowed, clavate; scape as long as succeeding joints, resting in groove at basal half of rostrum and reaching to eye. Prothorax $1\frac{1}{2}$ times as broad as long, sides rounded, broadest in middle, narrowed slightly behind and strongly constricted anteriorly, minutely pitted, and pale, with fine sparse golden pubescent below. Scutellum present. Elytra ovate, striated and finely pitted; pygidium exposed. Femora toothed. Eggs smooth, pearly white, elliptical to ovoid, about 0.6 mm. long and 0.4 mm. wide. Larvae wrinkled, grayish-white, crescent-shaped and legless with few scattered darker hairs. Pupae naked and resemble adults in general form; grayish-white with few scattered darker hairs. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies).
CEIR 8(48) 11-28-58



Figures of Amorphoidea lata (A) Larva (B) Pupa (C) Adult

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Cooperative
ECONOMIC INSECT
REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearinghouse and does not assume responsibility for accuracy of the material.

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Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GREENBUG more common and heavier on oats in Arkansas than in most years and scattered in northwestern Oklahoma counties. (p. 979).

PINK BOLLWORM situation in Arizona. (p. 980).

CARPET BEETLES more abundant in western Oregon and parts of California. (p. 982).

Distribution of CALIFORNIA FLATHEAD BORER in western North America. (p. 981).

Summary of INSECT CONDITIONS - 1958 - NEW MEXICO. (p. 984).

INSECTS not known to occur in the United States. (p. 989).

WEATHER BUREAU 30-DAY OUTLOOK

DECEMBER 1958

The Weather Bureau's 30-day outlook for December calls for temperatures to average below seasonal normals over the northern half of the nation from the Continental Divide eastward to the Atlantic Seaboard. Above normal temperatures are indicated for the California Coast and Florida. In other areas about normal temperatures for the season are in prospect. Precipitation is expected to exceed normal along the Gulf and Atlantic Coasts, over the Northern Plains and along the West Coast. Over the northern half of the nation much of the precipitation will be in the form of snow. Subnormal amounts are expected in the Southern Plateau, the southern Rocky Mountain States and the Central Plains. Otherwise near normal precipitation is indicated.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D.C. Price \$4.80 a year, \$2.40 a half year.

WEATHER OF THE WEEK ENDING DECEMBER 1

Another winter storm brought unusually cold weather to the northern half of the Nation. Subzero temperatures equaled or exceeded record November lows in Indiana and Ohio and fell to near record levels in most of the Great Lakes region, while subfreezing extended to some sections of the Gulf Coast. In contrast, near to record-breaking warm temperatures prevailed in the Middle and South Atlantic Coastal States during the early part of the week. Light to heavy snows also were part of the cold regime in northern areas east of the Rockies. Precipitation totals for last week were mostly under 1/2 inch west of the Mississippi, except in the coastal sections of Washington where over 1 inch fell. Unusually dry weather persisted in the Central Valley of California. East of the Mississippi, precipitation totals, generally over 1 inch, totaled over 4 inches in the North Carolina Capes. Sections without measurable precipitation were reported in northern Florida, northern Nebraska, southern North Dakota, northwestern Iowa, most of the Great Basin, California and southwestern Arizona.

Temperature averages rose from below normal the previous week to above normal in the Southwest, remained about 6° above normal in Florida and generally were lower and well below normal elsewhere. In the Ohio Valley and North Central Interior, temperatures averaged about 18° lower than for the preceding week. On last Monday, November 24, Baltimore, Maryland, with 72°, broke its 87-year high temperature record for that date; other daily records were broken in Tennessee, Georgia and Florida. The next day, Tampa, Florida, had 87°, a new late-season record. With falling temperatures in most areas during the week, International Falls, Minnesota, recorded a record November low of -27° and Dayton, Ohio, -2°; while the Akron-Canton, Ohio, Airport was the coldest for so early in the season. Monday, as the cold air mass centered over North Dakota moved eastward, it was followed by an area of low pressure from the Pacific Northwest. Strong northerly Arctic winds blew across the northern Great Plains, with peak gusts of 75 m.p.h. in Montana and 100 m.p.h. (estimated) in northwestern Colorado. Tuesday, blizzard conditions charged with bitter cold swept across the Great Plains. Wednesday, the leading edge of the huge, cold air mass from the Yukon swept through the Northeastern States with patches of glaze in New Hampshire. Thursday and Friday, rain from overrunning moist air turned to sleet or glaze in a band from Oklahoma into the New England States, and over two-thirds of Oklahoma was covered with ice. Friday and Saturday, southeasterly gales of 70 m.p.h. produced some damage in Connecticut and Massachusetts. Saturday, the

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - ARIZONA - Limited observations showed normal decline of adult populations. NEVADA - Egg survey indicates a buildup of early and late-maturing species. Egg beds in northern Elko County show Oedaleonotus enigma and Aulocara spp. carrying over without evidence of parasitism. Eggs of Camnula pellucida were abundant in valleys of Humboldt and Elko Counties, verifying the indicated adult survey rating so far. NEW MEXICO - Egg surveys in Dona Ana and Luna Counties showed 3 egg pods in 220 square feet sampled at 22 locations. UTAH - Egg surveys completed in Cache, Rich, Carbon, Grand and San Juan Counties and partially completed in Utah and Weber Counties show a slightly lower rating than the adult survey. WYOMING - Very few egg pods were found during survey in Niobrara, Platte, Goshen and Laramie Counties, though some areas of very heavy adult populations were sampled. No predators or parasites were noticed in any of the egg pods collected. (PPC, West. Reg., Oct. Rpt.).

MORMON CRICKET (Anabrus simplex) - UTAH - An additional 1,000 acres of rangeland in the Green Lakes area, Daggett County, were found to have a threatening infestation. This acreage is Forest Service Land, approximately 10 miles south-east of Manila. (PPC, West. Reg. Oct. Rpt.).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - KANSAS - Corn plants found 98 percent infested in Stafford and Reno Counties, November 21. (Painter).

RICE WEEVIL (Sitophilus oryza) - SOUTH CAROLINA - Much heavier in corn than usual. (Nettles, et al.).

A MEALYBUG (Trionymus rostellum) - CALIFORNIA - Medium on Sorghum halepense in Courtland area of Yolo County. (Cal. Coop. Rpt.).

SORGHUM MIDGE (Contarinia sorghicola) - ARKANSAS - Damage to sorghum has been observed in all sections of the State, being much more severe on late crops. (Ark. Ins. Rpt.).

GREENBUG (Toxoptera graminum) - ARKANSAS - Infestations on fall-seeded oats more common and heavier than in most years. Breeding plots at Stuttgart were treated 2 weeks ago. Oat fields in east and northeast areas are generally infested with small numbers. One field in Poinsett County averaged 75 per linear foot with spots in the field discolored. (Ark. Ins. Rpt.). OKLAHOMA - Survey of 80 small grain fields in 17 northwestern counties showed scattered infestations in 13 and none in 4 counties. Populations decreased toward the western portion of the area. Heaviest averaged 27 per linear foot, but was generally 3-7 per linear foot over most of the area. (VanCleave). VIRGINIA - Probably this species, heavy on small grains on the Eastern Shore. (Hofmaster).

APPLE GRAIN APHID (Rhopalosiphum fitchii) - OKLAHOMA - Averaged 1-50 per linear foot in small grain fields in northwestern part of State. (VanCleave).

A FLEA BEETLE - TEXAS - Damaged early wheat in Briscoe County. (Ledbetter).

WINTER GRAIN MITE (Penthaleus major) - TEXAS - Caused damage to several fields of oats in Falls County. (Hawkins).

A RICE DELPHACID (Sogatia orizicola) - ARKANSAS - Limited surveys in the State have been negative. (Ark. Ins. Rpt.).

CHINCH BUGS - SOUTH CAROLINA - Troublesome in lawns in Charleston and Richland Counties. (Nettles, et al.).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Ranged 5-300 per linear foot in northwestern barley fields. Very small populations in some wheat fields. (VanCleave).

CLOVER ROOT CURCULIO (*Sitona hispidula*) - MARYLAND - Adults averaged 3 per 10 sweeps on red clover at Fairland. (U. Md., Ent. Dept.).

CLOVER SEED CHALCID (*Bruchophagus gibbus*) - WISCONSIN - Incidence of infested seeds in red clover seed samples being received by State Seed Laboratory greater than in 1957. Samples from southern Clark County have highest infestations which range up to 8 percent. (Wis. Coop. Sur.).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - OKLAHOMA - Counts at seven-day intervals show slight increase over past 3 weeks in Payne County. (Bieberdorf). Averaged 10-17.5 per sweep in alfalfa fields in the Davidson area of Tillman County and 300-400 per linear foot in a field of young alfalfa in the same area. (Hatfield). KANSAS - Damaged fall-planted alfalfa in Saline County, November 15. (Harvey). OREGON - Remains active in Hermiston area of Umatilla County, November 24. (Bierman).

PEA APHID (*Macrosiphum pisi*) - ARKANSAS - Averaged 4-8 per 25 sweeps in alfalfa in Jackson County. (Ark. Ins. Rpt.).

THREE-CORNERED ALFALFA HOPPER (*Spissistilus festinus*) - ARKANSAS - Averaged 6-7 per 25 sweeps in alfalfa in Jackson County. (Ark. Ins. Rpt.). OKLAHOMA - Averaged 0.1-0.4 per sweep in alfalfa fields in Davidson area, Tillman County. (Hatfield).

FRUIT INSECTS

HICKORY SHUCKWORM (*Laspeyresia caryana*) - OKLAHOMA - Shucks of approximately 90 percent of pecans in Stillwater area infested with 1-4 larvae. (Bieberdorf).

NAVEL ORANGEWORM (*Paramyelois transitella*) - CALIFORNIA - Light to medium on walnuts in Kelseyville, Lake County. (Cal. Coop. Rpt.).

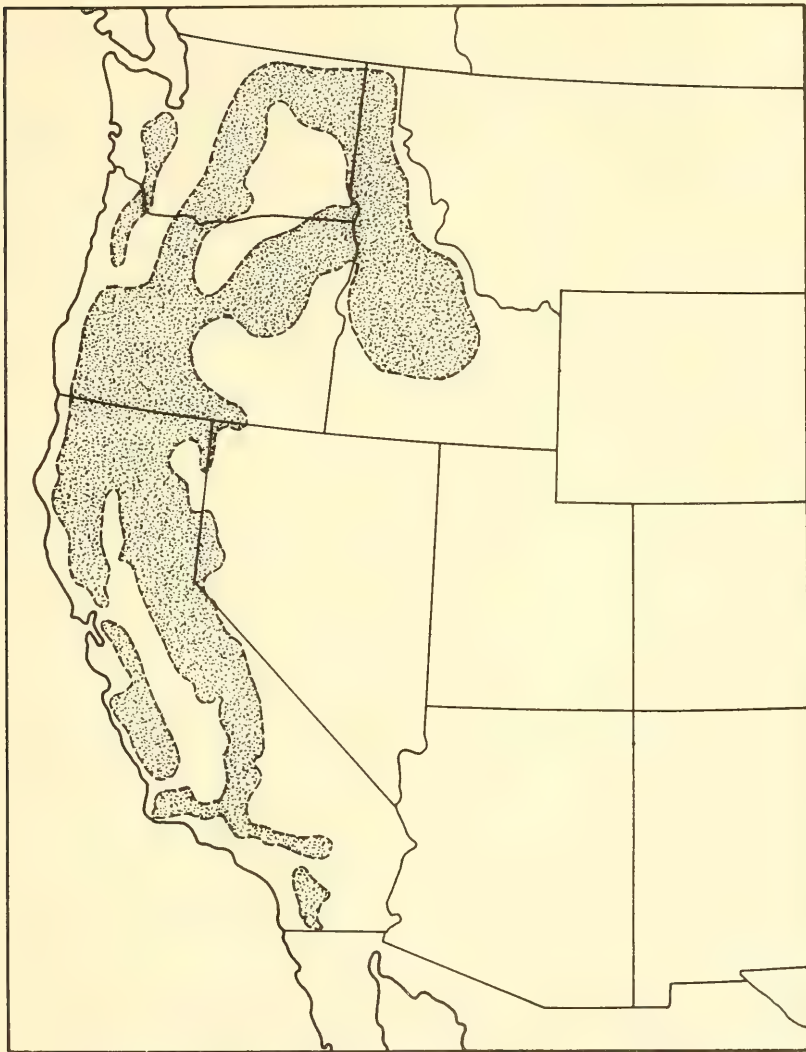
A WHITEFLY (*Pealius kelloggi*) - CALIFORNIA - Heavy on *Prunus ilicifolia* at Moorpark, Ventura County. (Cal. Coop. Rpt.).

COTTON INSECTS

PINK BOLLWORM (*Pectinophora gossypiella*) - ARIZONA - Field inspections disclosed a more extensive infestation in the south central part of the State than was expected. Since the original find in early July in the Gila River Valley of southwestern Maricopa County, the infestation has moved north and eastward across the county and southeastward into Pinal County. New finds were made in eastern Maricopa County and western Pinal County, which were, at the time, outside the quarantined area. The Arizona Commission of Agriculture and Horticulture extended the quarantine to include the entire cotton-producing portions of the State, except Yuma and Mohave Counties. Cochise, Graham, Greenlee, Maricopa, Pima, Pinal, Santa Cruz and Yavapai Counties are now under quarantine. (PPC). CALIFORNIA - During week ending November 28, six gin trash machines processed 5,263 bushels of trash in the San Joaquin Valley and southeastern desert areas from 55 gins, and 234 gin visits were made in inspection of 915 limit cleaners. All results were negative. (Cal. Coop. Rpt.).

A LEAF ROLLER (*Platynota stultana*) - CALIFORNIA - Light on cotton at Heber, Imperial County. Some attacking green bolls. (Cal. Coop. Rpt.).

DISTRIBUTION OF CALIFORNIA FLATHEAD BORER (Melanophila californica)
in Western North America



FOREST, ORNAMENTAL AND SHADE TREE INSECTS

A BARK BEETLE (Pityophthorus serratus) - CALIFORNIA - Medium on pines at Alamo, Contra Costa County. (Cal. Coop. Rpt.).

MEALYBUGS - CALIFORNIA - Pseudococcus maritimus heavy on Mammillaria uncinata (cactus) plants in Riverside, Riverside County. Phenacoccus gossypii heavy on nightshade in the Escondido area of San Diego County. (Cal. Coop. Rpt.).

SCALE INSECTS - TEXAS - Iderya purchasi damaged pyracantha in Limestone County (Garner). CALIFORNIA - Parlatoria oleae heavy on privet hedges at Dos Palos, Merced County. Lepidosaphes ulmi heavy on lilac at Jackson, Amador County, and Asterolecanium bambusae heavy on bamboo in Santa Paula, Ventura County. (Cal. Coop. Rpt.).

STORED-PRODUCT INSECTS

KHAPRA BEETLE (Trogoderma granarium) - ARIZONA - Three new infestations were found, one each in Maricopa, Mohave and Yuma Counties, and one reinfestation in Yuma County. (PPC, West. Reg., Oct. Rpt.). CALIFORNIA - Last known infestation in State fumigated November 16. Since the beginning of the eradication program the State has had 330 known infestations. During the week ending November 28, State, County and Federal inspectors expended 1,214 man-hours of inspection in 10 counties with negative results. (Cal. Coop. Rpt.).

Stored-grain Pests in Minnesota and Texas - Problems due to a grain beetle (Ahasverus advena), Indian-meal moth and confused flour beetle were reported in several elevators in MINNESOTA the week ending November 24. Most infestations were found in grain screenings. (Minn. Ins. Rpt.). In central and south central areas of TEXAS, stored-grain insects have developed into critical infestations about 30 days earlier than normal. (Cook).

BENEFICIAL INSECTS

PREDATORS - OKLAHOMA - Hippodamia convergens and Nabis sp. each averaged 0-1 per linear foot and lacewings 0-2 in fields of small grain in northwestern part of State. Lacewing eggs averaged 0-2 per linear foot in scattered areas. (VanCleave). H. convergens averaged 0-0.1 per sweep in alfalfa fields in Tillman County. (Hatfield). Several hundred adult Coleomegilla maculata found congregated under large board adjacent to wheat stubble in Payne County. (Walton).

MISCELLANEOUS INSECTS

CARPET BEETLES - OREGON - Carpet beetles, principally Anthrenus verbasci, much more abundant in western part of State than has been noted in several years. (Every). CALIFORNIA - An unusual number of complaints regarding A. verbasci and A. museum in homes in Contra Costa County. (Peters).

TERMITES - MINNESOTA - Several additional infestations of Reticulitermes flavipes found in St. Paul. These new properties were located in same general area in which previous infestations were found earlier in 1958. (Minn. Ins. Rpt.). OREGON - Winged forms of R. hesperus appeared at sites of infestations near Corvallis, week of November 23. (Every).

BROWN-BANDED ROACH (*Supella supellectilium*) - CALIFORNIA - Reported in 2 apartments in Oakland, Alameda County. (Peters).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Feltia subter.	Prod. ornith.	Perid. marg.	Heliothis zea
ARKANSAS						
Fayetteville						
10/30-11/19	34	19				38
Kelso 10/30-11/19	10	21			1	78
Morrilton 10/30-11/19	16	26				29
FLORIDA						
Gainesville 11/18-24		1	3			
Monticello 11/12-18		2				
Quincy 11/11-17			3			
SOUTH CAROLINA						
Charleston 11/24-30	9	26	41	1	1	1
WISCONSIN						
Middleton 11/22-28	1	2			1	12

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remnants of the storm that had spread a heavy blanket of snow from portions of the Mississippi Valley into upper New England, pushed into Canada. Sunday, the cold air mass, extending from the Rockies across the Southeast, was reinforced by a dome of cold air moving southward from Canada and temperatures remained below freezing throughout the day in most sections north of a line from southwestern Missouri to northern Delaware.

Snow during the past week extended as far south as the Texas Panhandle. On Monday morning, December 1, accumulations up to one foot were reported in parts of North Dakota, northern Michigan, western Pennsylvania, interior New York and northern areas of New England. In portions of Illinois, the snow on the 30th was the second earliest heavy snow this century. At Evansville, Indiana, 7 inches or more of snow exceeded any previous November monthly or daily total snowfall in 62 years. Over the weekend, snow squalls east of Lakes Erie and Ontario brought heavy accumulations to some areas. Colden, New York, reported 21 inches. Maine, Vermont and northern portions of New Hampshire were blanketed by amounts up to 11 inches. (Summary supplied by U. S. Weather Bureau).

SUMMARY OF INSECT CONDITIONS - 1958

NEW MEXICO

Prepared by Gerald Nielsen, et al.

Highlights: There was a general increase in GRASSHOPPER populations over 1957 on rangeland in all eastern counties, reaching threatening proportions only in a few areas. Cropland infestations in the irrigated area along the Rio Grande in Valencia, Bernalillo and Sandoval Counties also increased. Third-crop alfalfa was severely damaged in Bernalillo and Sandoval Counties. Voluntary programs in these three counties reduced crop losses to corn, vegetables and fruit trees. Two thousand acres of alfalfa were treated on the Isleta Indian Pueblo lands. During the summer, large flights of Trimerotropis pallidipennis settled on communities throughout the State and destroyed about 200 acres of tomato plantings in Luna County. Carrot beds were also severely damaged. Many farmers replanted 2 or 3 times. One intensive cooperative control program on rangeland was carried out in Union County where 148,249 acres were sprayed at the cost of \$68,802 or an average cost of about 46.5 cents per acre. The 1958 adult grasshopper survey shows that there are threatening to severe infestations on 23,200 acres of cropland. In addition, 830,820 acres of rangeland were found infested in fifteen counties. BEET LEAFHOPPER and wild host plants were more plentiful in cultivated and rangeland areas than in the past five years. Western yellow blight destroyed tomato stands in Hidalgo, Luna and Lea Counties. The virus killed an estimated 25-40 percent of plants in tomato fields at Deming. SPOTTED ALFALFA APHIDS parasitized by Praon pallitans were collected early in April. This was the first record of this parasite overwintering in New Mexico. Praon pallitans became well established in alfalfa fields in Mesilla Valley and has dispersed to 20 other counties from the two original release sites in Dona Ana and Roosevelt Counties.

Heavy STINK BUG populations in Quay, Curry, Roosevelt and Lea Counties did considerable damage to small grains. FALSE CHINCH BUGS became extremely numerous in grain sorghum fields in August and September causing severe losses in Quay, Curry, Roosevelt and Luna Counties. INSECTS were a major factor in the reduction in yields of tomato fields in Luna and Lea Counties from an average of 16 tons to about 4 tons per acre this season. Late infestations of PINK BOLLWORM in southern Dona Ana County caused heavy damage to green bolls on about 300 acres and was moderately heavy on 700 additional acres.

Cereal and Forage Insects: SPOTTED ALFALFA APHID (Therioaphis maculata) infestations appeared to be lighter than in past seasons, except for the first two cuttings in Chaves, Dona Ana and Eddy Counties. Several fields of seedling alfalfa were killed in Chaves, Eddy and Lea Counties. There was an early spring and an early fall buildup in several other counties, but little control was needed. Spring and fall buildups of PEA APHID (Macrosiphum pisi) caused minor damage to established stands of alfalfa. Some fields of seedling alfalfa were damaged in Dona Ana, Chaves and Eddy Counties. THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) was very common in southern alfalfa fields, often averaged over one per sweep during the spring and 2-3 per sweep during late summer and fall. No severe infestations of ALFALFA CATERPILLAR (Colias philodice eurytheme) were found this season.

Heavy rains appeared to have reduced populations considerably in many areas during late summer. Spotty and light infestations of PALE WESTERN CUTWORM (*Agrotis orthogonia*) and ARMY CUTWORM (*Chorizagrotis auxiliaris*) were found on volunteer wheat in Curry County. CORN EARWORM (*Heliothis zea*) heavily damaged early plantings of corn and later plantings averaged from 60-90 percent infested. Large populations of THRIPS (*Frankliniella occidentalis* and *F. minuta*) curled leaves of unsprayed, young alfalfa during May and June. Many growers treated for thrips along with treatment for aphids. FALL ARMYWORM (*Laphygma frugiperda*) was light on sorghum heads in Lea County the last week of August. LYGUS BUGS began to build up in alfalfa fields in eastern and southern areas during March. Counts were as high as 4-5 adults and 2-10 nymphs per sweep during May and June, and were a big factor in reducing alfalfa seed yields. WESTERN HARVESTER ANT (*Pogonomyrmex occidentalis*) was most destructive to rangeland in San Miguel, Union, Harding and Colfax Counties. BEET WEBWORM (*Loxostege sticticalis*) damaged young wheat fields in De Baca and Quay Counties during last two weeks of September. A MITE (*Oligonychus stickneyi*) was a serious pest of corn in all areas where it is grown for ensilage. SOUTHWESTERN CORN BORER (*Zeadiatraea grandiosella*) infestations in most corn fields in Quay, Curry, De Baca, Roosevelt and Luna Counties were 80-100 percent. Light in some sorghum fields. A FALSE CHINCH BUG (*Nysius raphanus*) was heavy and damaged grain sorghum in Luna and also in all southeastern counties. About 6000 acres were infested in Curry County alone. Losses were estimated at over 50 percent in several fields in Quay and Curry Counties. STINK BUGS caused little damage to wheat fields in Quay County and WHEAT HEAD ARMYWORM (*Faronta diffusa*) caused minor damage to wheat in Quay and Curry Counties. ALFALFA LOOPER (*Autographa californica*) was light in alfalfa near Raton. VARIEGATED CUTWORM (*Peridroma margaritosa*) was a minor problem in 1958. WHITE GRUBS were moderate to heavy. Winter wheat in the vicinity of Pleasant Hill, Curry County, during October was replanted in several fields. Heavy infestations of BLISTER BEETLES damaged alfalfa locally at Gila, Grant County. A SERPENTINE LEAF MINER damaged alfalfa foliage of first and second-cuttings in southern Eddy County. GREENBUG (*Toxoptera graminum*) was light and spotty in Curry and Quay Counties during February. Heaviest infestation found averaged about 2 per linear foot. CORN LEAF APHID (*Rhopalosiphum maidis*) severely damaged barley in southern Dona Ana County and moderate to heavy infestations damaged wheat and barley in Roosevelt, Chaves and Eddy Counties during the last week of May. ENGLISH GRAIN APHID (*Macrosiphum granarium*) was heavy and damaged wheat and barley which had not yet headed out in eastern counties during May.

Fruit Insects: CODLING MOTH (*Carpocapsa pomonella*) losses were high in most orchards of the State, ranging from about 2 percent "wormy" apples in treated orchards to almost 100 percent on unattended backyard trees. CLOVER MITE (*Bryobia praetiosa* complex) eggs were very numerous in untreated orchards during early spring and began hatching during first two weeks of April. Adults caused severe damage to apple and peach foliage in Lincoln, De Baca, Bernalillo, Sandoval, Rio Arriba, Otero and San Juan Counties during early summer. Tetranychus sp. was most serious in apple orchards in Rio Arriba, Sandoval and San Juan Counties. SHOT-HOLE BORER (*Scolytus rugulosus*) was very destructive in peach orchards in Lincoln, De Baca, Rio Arriba and San Juan Counties and killed cherry trees at Tesuque, Santa Fe County. APPLE GRAIN APHID (*Rhopalosiphum fitchii*) infested apple orchards in Espanola Valley during May. JUNE BEETLES were a problem on ripening peaches in southern counties. CAT-FACING INSECT damage seriously reduced quality of peaches in Rio Arriba County. Heavy oviposition injury by TREEHOPPERS was observed on apple trees at High Rolls, Otero County. PEAR-SLUG (*Caliroa cerasi*) defoliated cherry and choke cherry trees in Mora County. During first week of June ROSY APPLE APHID (*Anuraphis roseus*) was heavy in apple orchards in San Juan County, lighter in Rio Arriba, Sandoval and Santa Fe Counties. GREEN PEACH APHID (*Myzus persicae*) caused

extreme curling of leaves on peach trees throughout the State. Where control measures were not taken, leaves and fruit usually dropped. A SCALE (prob. Lecanium pruinosum) became a very serious pest of pecans in Dona Ana County. A GRAPE LEAFHOPPER (Erythroneura sp.) was a serious problem in vineyards throughout the State where no control was used. RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) damaged at least 1/3 of the apples at Albuquerque. Foliage was also severely damaged. A LEAF ROLLER (prob. Archips argyrospila) did extensive damage to foliage in apple orchards in Taos County. PEACH TWIG BORER (Anarsia lineatella) did extensive damage to terminal growth of peach trees in De Baca, Lincoln, Dona Ana, Eddy and Rio Arriba Counties. WOOLLY APPLE APHID (Eriosoma lanigerum) caused considerable damage to roots of apple trees in Hondo Valley during the spring. Light to heavy infestations were observed in apple orchards throughout the State. SAN JOSE SCALE (Aspidiotus perniciosus) was heavy in orchards in Bernalillo, Santa Fe, Sandoval, Rio Arriba and San Juan Counties. Lighter infestations were found in all fruit growing areas. FALL WEBWORM (Hyphantria cunea) defoliated pear and apple trees in Rio Arriba and Taos Counties. Several infestations damaged foliage on pecan trees in Dona Ana County. A PLUM APHID (Anuraphis helichrysi) severely damaged foliage of plum trees in De Baca and Bernalillo Counties.

Truck Crop Insects: CABBAGE LOOPER (Trichoplusia ni) was serious on lettuce again this season, requiring control at regular intervals. They were especially destructive on young fall lettuce in Mesilla Valley where the cost of control averaged about \$35.00 per acre. TOMATO HORNWORM (Protoparce quinquemaculata) was a problem on tomatoes and chili in gardens and fields where adequate control measures were not used. CORN EARWORM or TOMATO FRUITWORM (Heliothis zea) was of minor importance in most tomato fields because of adequate spray program until late in the season when rain and harvesting prevented control. Most garden corn was 100% infested. During September larvae caused light to heavy damage to lettuce fields in Dona Ana County. Several fields were 20-40 percent damaged. BEET LEAFHOPPER (Circulifer tenellus) populations were above normal. Curly top did extensive damage to tomatoes in Luna, Valencia, Bernalillo and Lea Counties. GRASSHOPPERS were destructive to crops in Valencia, Rio Arriba, Bernalillo and Luna Counties. POTATO PSYLLID (Paratrioza cockerelli) - Extensive damage was caused by psyllid yellows in potato fields in San Juan County. Very little trouble was encountered in Estancia Valley because of adequate control methods. COLORADO POTATO BEETLE (Leptinotarsa decemlineata) was light on potatoes in Curry County during first week of June. STINK BUGS severely damaged cabbage fields in Lea County during July and caused considerable damage to home gardens. CABBAGE APHID (Brevicoryne brassicae) damaged cabbage in Luna and Lea Counties during July. SQUASH BUG (Anasa tristis) was most serious on cantaloupes in Valencia, Socorro and Hidalgo Counties. A SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata tenella) and STRIPED CUCUMBER BEETLE (Acalymma vittata) were heavy on melons necessitating the replanting of some fields in Valencia County. Damage also occurred on melons and cucurbits in De Baca, Hidalgo, Bernalillo and Rio Arriba Counties. TORTOISE BEETLE (Metritona bicolor) damaged chili at Redrock, Grant County. ONION THRIPS (Thrips tabaci) was light to heavy on fall and spring onions, depending on control used. HARLEQUIN BUG (Murgantia histrionica) was heavy and damaged gardens in Mora County and was serious on cabbage in Lea County. MEXICAN BEAN BEETLE (Epilachna varivestis) was heavy on beans in Mora and Estancia Valleys causing severe damage where adequate controls were not used.

Cotton Insects: BOLLWORM (Heliothis zea) was controlled in most areas. Several severe infestations, however, damaged cotton in the Animas Valley and Deming area. Portions of these fields had as high as 60 percent of the bolls damaged. LYGUS BUGS (Lygus spp.) were considered as the most destructive pest of cotton this season. During early season, light to heavy infestations damaged squares and young bolls in all cotton growing areas. MITES were a minor problem in most areas. Late season infestations were generally light and spotty.

COTTON LEAFWORM (*Alabama argillacea*) was light and spotty in cotton fields this season. CABBAGE LOOPER (*Trichoplusia ni*) larvae were a problem throughout entire season in cotton fields, until late summer when large numbers of the larvae were attacked by a fungus and various species of predators. GRASSHOPPERS reduced cotton stands along fence rows and borders of fields in Hidalgo, Roosevelt, Luna and Lea Counties. ONION THRIPS (*Thrips tabaci*) was heavy, severely damaging seedling cotton plants in southern counties. Some growers were of the opinion that they caused loss of "bottom crop". COTTON FLEAHOPPER (*Psallus seriatus*) damage appeared to be lighter in most fields than in previous years. Only occasional specimens of COTTON SQUARE BORER (*Strymon melinus*) were collected from cotton fields in Dona Ana, Socorro, Eddy and Lea Counties. COTTON APHID (*Aphis gossypii*) was a problem in a few fields early in the season, but late season populations were generally heavy in many fields in southern counties. During May of 1958, COWPEA APHID (*Aphis medicaginis*) was only spotty and light to moderate in Eddy and Dona Ana Counties, while during the same period in 1957 it was generally heavy throughout the cotton growing area. No evidence of economic buildup of PINK BOLLWORM (*Pectinophora gossypiella*) was found in the State until the first of October when several heavy infestations of green bolls were found in about 300 acres and moderately heavy infestations on 700 additional acres in the southern part of Dona Ana County.

Forest, Ornamental and Shade Tree Insects: FALL WEBWORM (*Hyphantria cunea*) larvae were very abundant on poplar and elm trees throughout the State and especially numerous on cottonwood trees along Rio Grande River. A LEAFHOPPER (*Empoasca bipunctata*) - Heavy infestations stippled leaves of elm trees throughout the State. A MITE (*Oligonychus coniferarum*) damaged juniper in Bernalillo and Dona Ana Counties. A BUD MITE (*Aceria paradianthi*) was collected on carnations in a greenhouse at Albuquerque, the first record for the State. AN APHID (*Cinara tujafilina*) was heavy throughout the State on arborvitae. POPLAR TWIG GALL APHID (*Pemphigus populi-rumulorum*) galls were very numerous on poplar trees at Hatch. NITIDULIDS (*Carpophilus* spp.) caused considerable damage to roses throughout the State. BOXELDER LEAF ROLLER (*Gracilaria negundella*) denuded boxelder trees in Santa Fe and Rio Arriba Counties during June. MOURNING-CLOAK BUTTERFLY (*Nymphalis antiopa*) larvae defoliated elm trees at Willard and Estancia, Torrance County, and Las Vegas, San Miguel County. SMALLER EUROPEAN ELM BARK BEETLE (*Scolytus multistriatus*) infested American elm trees at Albuquerque. A TUSSOCK MOTH (*Homocampa* sp.) was moderate on 12,000 acres in the Sandia Mountains. Egg masses were moderate to heavy. A new outbreak of FIR ENGRAVER BEETLE (*Scolytus ventralis*) was found in Lincoln National Forest and was heavy on 5,000 acres of white fir. *S. ventralis* also caused considerable damage to white fir on Sandia Mountains. The association of *Ips* spp. and *Dendroctonus* spp. decreased from 1957 when there were about one million acres damaged compared with about 200,000 acres in 1958. Damage by DOUGLASS-FIR BEETLE (*Dendroctonus pseudotsugae*) decreased from 700,000 acres in 1957 to 500,000 in 1958. SPRUCE BUDWORM (*Choristoneura fumiferana*) increased the number of acres partially defoliated in northern New Mexico from 80,000 acres in 1957 to 220,000 acres in 1958. An ASPEN LEAF ROLLER (probably *Archips conflictana*) was active in aspen in Carson National Forest. GREAT BASIN TENT CATERPILLAR (*Malacosoma fragilis*) defoliated acreage was about the same as in 1957, or about 190,000 acres. A NEEDLE MINER (*Recurvaria* sp.) has almost disappeared in ponderosa pine in Carson National Forest.

Insects Affecting Man and Animals: HORN FLY (*Siphona irritans*) was troublesome to cattle and horses throughout the season. MOSQUITOES were much more annoying in 1958 in cities along the Rio Grande because of above normal precipitation. SPINOSE EAR TICK (*Otobius megnini*) was moderately heavy on cattle in Dona Ana and Luna Counties. CATTLE LICE were prevalent on cattle during winter and spring. CATTLE GRUBS (*Hypoderma* spp.) began attacking cattle in Luna and Sierra Counties the latter part of February. Ranchers throughout the State

had trouble with larvae of a SCREW-WORM (Callitroga sp.) getting into wounds on cattle and horses and were treating cattle during the latter part of October in southern counties. SARCOPTIC MANGE MITE (Sarcoptes scabiei var. suis) infested several swine herds in Hidalgo County and was fatal to weaner pigs when extremely heavy. SHEEP KED (Melophagus ovinus) was quite abundant on sheep during shearing in De Baca, Torrance and Lincoln Counties.

Beneficial Insects: Praon palitans has become well established in alfalfa fields in Mesilla Valley and has dispersed to 20 other counties from the two original release sites in Roosevelt and Dona Ana Counties. GREEN LACEWING adults and larvae were very abundant in alfalfa and cotton fields throughout the cultivated areas of the State. DAMSEL BUGS (Nabis spp.) were very high in alfalfa fields all season. A BRACONID (Aphidius testaceipes) parasitized cotton aphid in Mesilla Valley cotton fields. Aphids were 70-90 percent parasitized in many fields with as many as 150-200 parasitized aphids per leaf. SYRPHID larvae were abundant in wheat fields infested with aphids at Cimmaron, Colfax County.

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

PLUM FRUIT MOTH* (*Laspeyresia funebrana* (Treitschke))

Economic Importance: Plum fruit moth or red plum maggot is a serious pest of plum in wide areas of Europe. Its damage has also been reported from Western Asia and North Africa. In some years as much as three-fourths of the plum crop has been lost to this insect in France. Over 60 percent of the prunes are infested annually in the Black Sea area of the Caucasus (USSR) where the moth is regarded as the most important pest of the crop. It is also one of the main pests of plums in Turkestan (USSR) and in the British Isles. Large consignments of plums were condemned at canneries in England in 1935 because of red plum maggot. Other stone fruits are also attacked but apparently plum is the preferred host.

Distribution: Temperate Europe through Siberia (USSR), Asia Minor, North Africa.

Hosts: Plum, peach, cherry and other stone fruits. Also reported from apple and walnut.



General Distribution of Plum Fruit Moth

Life History and Habits: The biology is not fully known. In France it has one, perhaps two, generations a year. The late appearing moths may represent an extended emergence period. The first adults appear about the end of June when plums are approaching maturity. Eggs are deposited at the base of the stalk of the fruit and hatch in about 10 days. The young larva bores into the tissues leaving a conspicuous entrance hole surrounded by frass. From the stem the larva migrates into the pulp of the fruit and tunnels around the stone leaving behind it rotting tissue mixed with excrement. By the end of August the larva is fully fed and bores out of the fruit. A gummy exudate often forms at the exit hole. The larva then seeks hibernation quarters such as cracks and crevices in the bark. There it spins a cocoon in which it pupates the following spring.

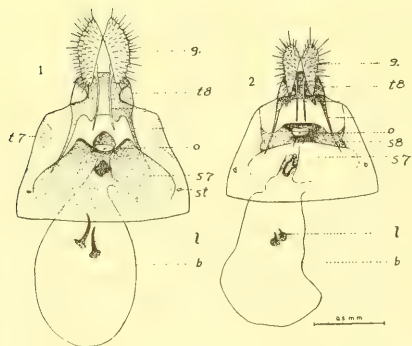
Description: The moth is smaller than the codling moth, having expanse of 10-14 mm. It is generally dark gray and has some external resemblance to oriental fruit moth. The hindwings are uniformly dark brown, a little more clear than the forewings. The insect is thickset; wings are rectangular, large,

*Larva called red plum maggot and adults also known as plum tortricid (Tortricidae, Lepidoptera).

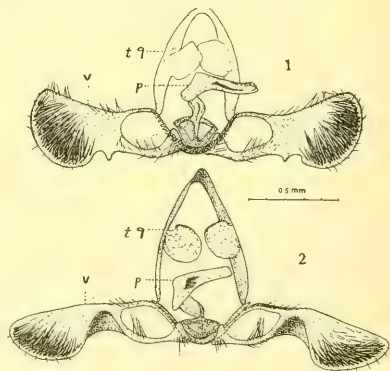
strongly truncate on extremities and have a poorly developed marginal fringe. The genitalia of *L. funebrana* differ from those of *Carpocapsa pomonella* as illustrated below. The larva attains a length of 10 mm. It is more slender than *C. pomonella* and the reddish color lighter, almost white, with the head and thoracic plate black. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies and the U. S. N. M.) CEIR 8 (49) 12-5-58



Adult and Larva of *Laspeyresia funebrana*



Female Genitalia of *L. funebrana* (1) and *Grapholitha molesta* (2)



Male Genitalia of *L. funebrana* (1) and *Grapholitha molesta* (2)

g.- gonapophyses; t8,s8 - tergite & sternite of 8th abdominal segment
t7,s7-tergite & sternite of 7th abdominal segment; o - orifice of bursa copulatrix; b - bursa copulatrix; st - stigmata; l - laminae dentatae

v - valves of forceps; p - copulatory organ; t9 - tergite of 9th abdominal segment.

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Cooperative
**ECONOMIC INSECT
REPORT**

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearinghouse and does not assume responsibility for accuracy of the material.

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Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

Winter grain PEST surveys in some southwestern States. (p. 993).

SPOTTED ALFALFA APHID damaging alfalfa in Payne County, Oklahoma. (p. 993).

MEADOW SPITTLEBUG survey in New Jersey. (p. 994). PEPPER WEEVIL surveys in New Jersey negative for 1958. (p. 994).

An IPS BEETLE damaging pines and is threat to timber stands in areas of California. (p. 995).

First KHAPRA BEETLE find in California for six months. (p. 996).

INSECT DETECTION: A tineid (Ereunetis minuscula) new to Florida. (p. 994).

CORRECTION. (p. 996).

SUMMARY OF INSECT CONDITIONS - 1958 - Oregon (p. 997), Wyoming (p. 1001).

INSECTS not known to occur in the United States. (p. 1003).

Reports in this issue are for the week ending December 5, unless otherwise designated.

WEATHER OF THE WEEK ENDING DECEMBER 8

Blizzards, heavy snow, sleet, glaze and subzero temperatures in the North Central. Interior and record-breaking heat and dryness in the far Southwest were the main features of the weather of the week. Dry weather has overspread more of the country. Precipitation totals were generally under 1/2 inch. Totals exceeding 2 inches were reported only in the Pacific Northwest, west of the Cascades. In the rest of the Nation there were some areas with amounts over 1 inch in lower New England, parts of Florida and the States bordering Canada. The largest area without measurable precipitation extended from the southwestern Mexican Border States into the central Mountain States. Some nearby States also had small areas without measurable precipitation, as well as a few coastal sections of North Carolina and Virginia. In South Carolina, rainfall since July was slightly over one-half of normal, and around one-fourth of normal for the last 30 days; soil moisture is nearing the critical stage and the soil is too dry for plowing. In the southeastern half of Georgia, there have been some stations with less than 1/2 inch precipitation during the last 6 weeks. Rains in northwestern Florida, generally the first since early November, eased the forest fire danger.

Some icy conditions were reported Tuesday through Sunday, mostly in the northeastern quarter of the country. Freezing rain occurred early in the week in North Dakota and Minnesota and spread further south and east during midweek, falling in many sections from coastal Maine across the Hudson Valley and westward through the upper Mississippi Valley to the eastern Dakotas. This band separated the southern rains from the northern snow areas. Another icy band at midweek extended from Montana and the northern Rockies into the western sections of Kansas and Nebraska and over the east slopes of the mountains in New Mexico and in northern Texas. Colorado reported hazardous conditions over a large area. In the Pacific Northwest, the weekend rains sometimes froze over portions of interior Washington. In northern interior areas east of the Rockies, temperatures for the week averaged from 3° to as much as 11° below normal. Subzero minima during the weekend ranged down to -23° at International Falls, Minnesota. In contrast, averages for the week in the Far Southwest ranged from 4° to 9° above normal, with record-breaking high temperatures for December of 94° at Los Angeles Airport, California, 86° at Yuma, Arizona, and 67° at Ely, Nevada. During the past week, 1 inch or more of new snow fell over interior New England, the Ohio Valley, scattered areas in the Mississippi Valley down through the Arkansas Mountains and the upper mountain regions of the Far West. Travel was hampered by occasional blizzard conditions in North Dakota and by snow squalls from there into northern New York and New England. A 33-inch snowfall in 24 hours, 15 inches falling in 3 hours, and a depth of 56 inches on the ground set new records at Oswego, New York. Boonville, New York, reported an accumulated depth of 46 inches and roads were blocked and cars abandoned north of Syracuse. A heavy snow cover favored northeastern ski resorts for the second consecutive week. (Summary supplied by U. S. Weather Bureau.)

CEREAL AND FORAGE INSECTS

GREENBUG (*Toxoptera graminum*) - VIRGINIA - Probably this species, severely attacked barley and oats in lower Middlesex County (Edwards) and is heavy on oats and barley on a Nottoway County farm (Rowell, Cassell). OKLAHOMA - Averaged 0-1 per linear foot in scattered fields of fall-seeded wheat in southwestern area of State (VanCleave, Meharg) and 0-25 in north central area (Wood). Considerable numbers occurred in a field of reseeded wheat in the Tonkawa area. (Henderson). TEXAS - Light, non-economical infestations found in 21 of 114 small grain fields examined in 13 scattered counties, November 13-21. Parasites and predators quite numerous in southern part of State. (Chada). None found in 15 fields checked in 5 central counties, December 3. (Hawkins). NEW MEXICO - Averaged 0.5-1.5 per linear foot in 50 percent of wheat fields examined in Quay, Curry and Roosevelt Counties. (N. M. Coop. Rpt.).

APPLE GRAIN APHID (*Rhopalosiphum fitchii*) - OKLAHOMA - Averaged 0-15 per linear foot in some fall-seeded wheat fields in southwestern area (VanCleave, Meharg) and 0-50 in north central area (Wood).

CORN LEAF APHID (*Rhopalosiphum maidis*) - OKLAHOMA - Averaged 0-200 per linear foot in some southwestern fields of fall-seeded grain. (VanCleave, Meharg). NEW MEXICO - Averaged 2-4 per linear foot in barley in Quay, Curry and Roosevelt Counties. (N. M. Coop. Rpt.).

ENGLISH GRAIN APHID (*Macrosiphum granarium*) - TEXAS - Light, non-economical infestations found in 10 of 114 fields of small grain examined, November 13-21. Infestations were located in 7 counties. (Chada). None found in 15 small grain fields examined in 5 central counties, December 3. (Hawkins).

WINTER GRAIN MITE (*Penthaleus major*) - TEXAS - Up to 40-50 per square foot, mostly in volunteer grain, found in 10 of 114 fields examined November 13-21. Infestations were found in 8 counties. Growing conditions are good, damage not apparent. (Chada). Infestations up to 40-50 per square foot found in 2 fields of volunteer grain in McLennan County; light infestations in 2 fields in Navarro County; and 2 fields in Bosque and Falls Counties had light damage. Survey made December 3. (Hawkins).

LEAFHOPPERS - TEXAS - Light infestations in practically all small grain fields. (Chada).

VARIEGATED CUTWORM (*Peridroma margaritosa*) - TEXAS - Averaged 2 per square foot in field of grain and vetch in Navarro County. (Hawkins).

PINK SCAVENGER CATERPILLAR (*Pyroderces rileyi*) - PENNSYLVANIA - Two adults in kernel of field corn near Philadelphia, November 22. (Menusan).

APHIDS - CALIFORNIA - *Sappaphis foeniculus* and *Aphis medicaginis* medium on clover in the Natoma area of Sacramento County. (Cal. Coop. Rpt.).

PEA APHID (*Macrosiphum pisi*) - NEW MEXICO - Generally light in alfalfa fields in southern part of State. Winged forms abundant. (N. M. Coop. Rpt.).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - VIRGINIA - Remained active on alfalfa in Franklin County. (Rowell, White). OKLAHOMA - Heavy populations seriously damaged or killed alfalfa plants in 2 Payne County fields. (Walton). NEW MEXICO - Generally light in fields in southern counties. (N. M. Coop. Rpt.).

BROWN WHEAT MITE (*Petrobia latens*) - OKLAHOMA - Small numbers in fall-seeded fields, Tillman and Garfield Counties. (VanCleave, Meharg). TEXAS - None found in small grain examined in north central, central and southern areas, Nov. 13-21 (Chada) or in 5 central counties checked Dec. 3 (Hawkins).

MEADOW SPITTLEBUG (*Philaenus leucophthalmus*) - NEW JERSEY - Except for 1956, egg mass numbers have declined steadily since the beginning of fall surveys in 1953 and the species has been considered less important as a pest of alfalfa. Egg populations in 1958 are lower than at any time in the past. It appears that the species will be less of a pest in 1959 than at any time since 1954. Highest populations can be expected in Gloucester County and northwestern counties, as usual. (Coop. Sur.).

WHITE GRUBS - VIRGINIA - *Cyclocephala* sp. believed species responsible for damage of lawn in Boones Mill area, Franklin County, and for complaints of lawn damage in Blacksburg, Montgomery County. (Amos).

FRUIT INSECTS

AN ACORN MOTH (*Valentinia glandulella*) - VIRGINIA - Larvae caused heavy damage to Chinese chestnuts in Northampton County this fall. Det. H. W. Capps. (Rowell, Nottingham).

HICKORY SHUCKWORM (*Laspeyresia caryana*) - TEXAS - Damaged pecans in Polk County. (Wrenn).

A TINEID (*Ereunetis minuscula*) - FLORIDA - Larvae collected on lychee at Clearwater, Pinellas County, constitute first record for State. (Fla. Coop. Sur.).

Citrus Insect Situation, Lake Alfred, Florida, Fourth Week in November - PURPLE SCALE activity declined. Infestations presently about average, but expected to go to low level in most districts during December. FLORIDA RED SCALE will remain near present high level for next 7-14 days. Although infestations generally will drop during December, level will be high throughout the month. CITRUS RED MITE activity increased, infestation level about normal for this time of year. Higher level expected in December. CITRUS RUST MITE activity decreased on leaves and fruit. Infestations will remain near present levels during December. TEXAS CITRUS MITE infestations decreased and are expected to remain below present levels through the winter. (Fla. Coop. Sur.).

TRUCK CROP INSECTS

A CUTWORM (*Proxenus mindara*) - CALIFORNIA - Larvae damaged cantaloup plantings in Fresno County earlier in 1958 and are now damaging sweetpotato plantings. Medium numbers of adults taken in light traps, week of December 5. Adults reared from larvae that attacked cantaloup determined as this species by George Okumura. (Forst, Lange).

CARROT WEEVIL (*Listronotus oregonensis*) - TEXAS - Heavy and feeding on parsley in Hidalgo County. (White).

COWPEA WEEVIL (*Callosobruchus maculatus*) - CALIFORNIA - Heavy on black-eyed peas in Santa Margarita, San Luis Obispo County. (Cal. Coop. Rpt.).

PEPPER WEEVIL (*Anthonomus eugenii*) - NEW JERSEY - During June and July, 1958, 32 fields in the previously infested area were checked for this weevil and in September and October 29 fields in the same area were checked again. No weevils were found in either the formal survey or the informal searches. It appears that the infestation, which was established in the Vineland area, did not survive the winter in detectable numbers. (Coop. Sur.).

RED-NECKED CANE BORER (Agrilus ruficollis) - VIRGINIA - Heavy in red raspberry canes in Blacksburg and caused loss of crop. (Willard, Kite).

GREEN PEACH APHID (Myzus persicae) - CALIFORNIA - Light on broccoli in the Arroyo Grande area of San Luis Obispo County. (Cal. Coop. Rpt.).

LEAF MINERS - CALIFORNIA - General on spinach plantings in Woodland area of Yolo County. Oviposition punctures on most cotyledons and first true leaves. No mining at this time. (Stomblor).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - NEW MEXICO - Inspection of infested cotton fields in southern Dona Ana County showed that recent freezing temperatures killed larvae in top green bolls, but an occasional live larva was found in lower dry bolls. (N. M. Coop. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - NORTH CAROLINA - Situation improved over last report of infestation of pine in Tyrrell County. (Green). See CEIR 8(37):803.

WESTERN PINE BEETLE (Dendroctonus brevicomis) - CALIFORNIA - Caused considerable killing of groups of pines in Nevada-Yuba County areas. Results of logging activities considered responsible for insect increase. (Gunter, Noyes).

AN IPS BEETLE (Ips plastographus) - CALIFORNIA - Considerable damage to Monterey pine in Cambria area, San Luis Obispo County. Heavy infestations developed as result of logging operations and are aggressively attacking and killing large numbers of trees. Scattered infestations in Carmel-Point Lobos area constitute threat to timber stands. (Struble).

OAK SKELETONIZER (Bucculatrix ainliella) - PENNSYLVANIA - Cocoons covering bark of oak in Erie County, Sept. 29. (Adams).

A SAWFLY (Neodiprion pratti pratti) - NORTH CAROLINA - Reported in CEIR 8(21):415 as Neodiprion sp. prob. dyari and in CEIR 8(46):941 as Neodiprion sp., determined as this species by B. D. Burks. (Farrier).

SCALE INSECTS - TEXAS - Icerya purchasi damaged ornamentals in Limestone County. (Kinchelse). CALIFORNIA - Aspidiotus camelliae medium on holly in Watsonville, Santa Cruz County. Lineaspis cupressi heavy on juniper in the Coalinga area, Fresno County. (Cal. Coop. Rpt.).

A BARK APHID (Pterocomma smithae) - MARYLAND - On willow in Ellicott City and Rockville. Many eggs on twigs. (U. Md., Ent. Dept.).

INSECTS AFFECTING MAN AND ANIMALS

CATTLE GRUBS (Hypoderma spp.) - UTAH - Appearing in backs of some cattle in Millard and Box Elder Counties. (Knowlton).

SHEEP SCAB MITE (Psoroptes equi var. ovis) - VIRGINIA - Found on 518 of 538 sheep inspected in the State during October. (Morris).

STORED-PRODUCT INSECTS

KHAPRA BEETLE (Trogoderma granarium) - CALIFORNIA - Single, heavy infestation reported from Ripley, Riverside County, is first infestation reported in 6 months. (Cal. Coop. Rpt.).

BENEFICIAL INSECTS

PREDATORS - OKLAHOMA - Hippodamia convergens averaged 0-1 and Nabis sp. 0-2 per linear foot in fields of fall-seeded grain in southwestern area of State. H. convergens averaged up to 600 per square foot in little bluestem grass in the same area. (VanCleave, Meharg).

MISCELLANEOUS INSECTS

BROWN-BANDED ROACH (Supella supellectilium) - MARYLAND - Troublesome to homeowners in Westminster, Rockville and Silver Spring. (U. Md., Ent. Dept.).

A SUBTERRANEAN TERMITE - UTAH - Damaged a home at Ephraim, Sanpete County. (Knowlton).

CORRECTION

CEIR 8(48):963 - PEA APHID - OKLAHOMA - Averaged 5-25 per sweep in some alfalfa fields in northeastern area.

LIGHT TRAP COLLECTIONS

	<u>Pseudaletia</u> <u>unipuncta</u>	<u>Agrotis</u> <u>ypsilon</u>	<u>Feltia</u> <u>subterranea</u>	<u>Heliothis</u> <u>zea</u>
LOUISIANA				
Baton Rouge 11/28-12/4	4	16	28	2
Franklin 11/28-12/4		2	2	
MISSISSIPPI				
*State College 11/22-24	14	3		3

*Two traps - State College.

SUMMARY OF INSECT CONDITIONS - 1958

OREGON

Prepared by Joseph Capizzi*

Highlights: PAINTED-LADY was a major problem, attacking many vegetables during early summer. Forewarned by large light trap collections at Salem and Walla Walla, extremely large numbers of BLACK and VARIEGATED CUTWORMS that appeared in the State were not unexpected. ALFALFA LOOPER was one species of looper that caused considerable damage from Umatilla County west to Linn and Benton Counties. CABBAGE LOOPER was a problem throughout the season in the northern Willamette Valley. ORIENTAL FRUIT MOTH continued to gain locally in the Salem area with twice as many moths collected in baitpans (347) as in 1957. Twenty orchards are known infested. CYCLAMEN MITE was found in commercial strawberry plantings in the Willamette Valley. Nineteen of 196 fields inspected were found infested this fall. BEET ARMYWORM, uncommon in Oregon, appeared in large numbers attacking truck crops and damaged ripening fruit. SPOTTED ALFALFA APHID invaded the State September 13. Subsequent surveys established its presence in four northern counties.

Cereal and Forage Insects: GRASSHOPPER populations (predominately Melanoplus spp.) were the lowest recorded in the Willamette Valley for several years. From USDA reports, this was true of the entire State in 1958. MORMON CRICKET (Anabrus simplex) nymphs averaged 25 per square yard on 3500 acres of rangeland in Gilliam County April 29. Near freezing weather the week of May 17 decreased this infestation to less than one per square yard. A LEAF MINER (Phytomyza nigra) was more numerous than for several years on grass and grain fields in Benton and Lane Counties. CUTWORMS (Peridroma margaritosa and Agrotis ypsilon) damaged several hundred acres of barley and some oat fields were 10-30 percent damaged in lower Klamath Lake area June 23. CORN EARWORM (Heliothis zea) was very abundant with nearly all fields 100 percent infested in the upper Columbia River counties by harvest time. Increased infestations developed in the mid-Willamette Valley counties during 1958, with cannery samples showing losses ranging to 7 percent of ear weight. Late season losses showed 60-90 percent of ears damaged. A FLEA BEETLE (probably Diachus auratus) caused unusual amount of damage to crimson clover in Polk County. The overwintering generation appeared in large numbers in early May. A MITE (Siteroptes graminum) implicated in the transmission of "silvertop disease" to fescue, was recovered from Chewings fescue in January, and found in diseased grass stems in Clackamas County June 11. OMNIVOROUS LEAF TIER (Cnephasia longana) populations were low compared with those of 1957. ENGLISH GRAIN APHID (Macrosiphum granarium) was light to moderate in wheat near Milton-Freewater and small fields near Pratum, and increased in Umatilla County by mid-season but was not reported as damaging from any other growing areas. As a yellow dwarf virus vector, it was of concern in spring planted barley and oats in the Willamette Valley. PEA LEAF WEEVIL (Sitona lineata) damaged legumes during the spring from Columbia County south through Polk and Marion Counties. Increase in range noted through Linn and Benton Counties and well into Lane County. Pea leaf weevil disappeared from Polk and Yamhill County legume fields between July 23-30 probably because of extremely hot weather. CLOVER ROOT CURCULIO (Sitona hispidula) was numerous in Klamath County from early March on alsike clover but was not unusually abundant elsewhere during 1958. PEA APHID (Macrosiphum pisi) did not build

*With the assistance of entomologists from the State Department of Agriculture, Oregon State College and other agencies.

up excessively in the Willamette Valley but high populations appeared in Gilliam and Umatilla Counties in early April and late May. In Ontario, controls on alfalfa were necessary the end of May. Alsike clover and alfalfa were seriously infested in early June in Klamath County. In Jackson County, populations varied from field to field throughout the season. ALFALFA WEEVIL (Hypera postica) was not a serious threat during 1958. LYGUS BUGS (Lygus spp.) were generally abundant and damaged seed legumes where controls were delayed or omitted. Particular areas of above normal infestation were near Ontario-Adrian, and in Umatilla County on alfalfa. CLOVER SEED WEEVIL (Miccotrogus picrostris) caused moderate damage to alsike clover in Klamath County and to ladino in Linn County in early June. CLOVER ROOT BORER (Hylastinus obscurus) was serious locally in Marion County in first-year red clover seed fields. A BILLBUG (Calendra venatus confluens) damaged lawns in Benton County and Merion blue grass fields in Marion County. HESSIAN FLY (Phytophaga destructor) incidence was low in 1958, with light early season damage to winter wheat in Polk, Marion and Yamhill Counties. A NITIDULID (Meligethes nigrescens) began migrating to red clover July 4, two weeks earlier than in 1957. Pole beans were not in blossom at this time. Emergence reached a rapid peak and populations dropped below economic levels by July 21. TWO-SPOTTED SPIDER MITE (Tetranychus telarius) populations were high in Umatilla County alfalfa fields during July and control was necessary.

Fruit Insects: CODLING MOTH (Carpocapsa pomonella) emerged May 1 in Jackson County, May 8 in the Willamette Valley and May 11 and 14 at The Dalles and Hood River respectively. In Jackson County a partial third brood developed. More fruit injury occurred than usual. In Hood River, infestations were heavy and larger catches were made than at any time since 1953. BLACK CHERRY APHID (Myzus cerasi) emerged in the mid-Willamette Valley about March 16, built up in many cherry orchards in May and gradually dropped by early August. First-brood nymphs of PEAR PSYLLA (Psylla pyricola) were observed March 11 in the Medford area, considerably in advance of 1957. Heavy natural mortality occurred early in the season in Jackson County. Control was less difficult than in 1957. In the Willamette Valley, pear psylla was more abundant than usual. PEAR THRIPS (Taeniothrips inconsequens) populations were generally lower than in 1957. ORIENTAL FRUIT MOTH (Grapholitha molesta) trapping continued on a large scale throughout the State. The first moth was collected near Salem May 7. Populations increased in known infested orchards. Fruit damage was noted for the first time in this area. CALIFORNIA PEAR-SLUG (Pristiphora californica) - An unusual occurrence in the Medford area caused considerable defoliation to pear orchards in early May. EUROPEAN RED MITE (Panonychus ulmi) built up in Benton County apple orchards in early July. A slight increase over 1957 was noted in Jackson County. TWO-SPOTTED SPIDER MITE continued to show resistance to organic phosphates in the Medford area. Spotty infestations occurred in Jackson County pear orchards. In the Willamette Valley, populations built up on stone fruits in late August. At Hood River, this and Eotetranychus carpini were more abundant during July on apples and pears than in the previous four years. PEACH SILVER MITE (Vasates cornutus) became quite abundant on peach foliage after harvest in the Medford area. A PLUM NURSERY MITE (Vasates fockeui) severely damaged prune nursery stock in Portland and young prune trees in the Willamette Valley in early August. RED-HUMPED CATERPILLAR (Schizura concinna) was abundant in poorly kept apple orchards in Deschutes County in August, and appeared locally in apple, prune and other fruit orchards in Milton-Freewater. PEACH TWIG BORER (Anarsia lineatella) numbers were larger than normal in the Willamette Valley during June and caused late summer fruit damage in a few Clackamas County peach orchards. APPLE APHID (Aphis pomi) eggs were on 5 percent of apple trees in several orchards at Milton-Freewater in February. Eggs in the Medford area were not as abundant as in 1957. Apple aphid was active and moderately plentiful in Benton County apple orchards by March 16. PEAR LEAF BLISTER MITE (Eriophyes pyri) eggs ranged from few to 154 per bud February 17 at Medford.

First brood appeared March 4 in Jackson County. Populations appeared on the decrease in 1958. A build-up was observed in Marion and Yamhill County pear orchards in May. Infestations of WOOLLY APPLE APHID (*Eriosoma lanigerum*) were reported from Yamhill County apple orchards in May. LECANIUM SCALE (*Lecanium corni*) was fairly abundant in Marion County prune and cherry orchards during the winter months. Peaches in Yamhill and prunes in Marion Counties were reported infested in May. OBLIQUE-BANDED LEAF ROLLER (*Archips rosaceana*) was heavy in neglected apple orchards in the Willamette Valley during May. WESTERN CHERRY FRUIT FLY (*Rhagoletis cingulata indifferens*) controls were adequate when spray programs were followed. TWO-SPOTTED SPIDER MITE was generally low in small fruits where it was troublesome in 1957. Build-up in late summer required some control. Strawberries in Yamhill and Marion Counties had spotty infestations in late August and September. STRAWBERRY CROWN MOTH (*Ramosia bibionipennis*) was heavy in some Washington County hill plantings in March. MEADOW SPITTLEBUG (*Philaenus leucophthalmus*) hatched in the Willamette Valley the week of April 6. Heavy populations built up on legumes, but remained normal on strawberries in 1958. CURRANT FRUIT FLY (*Epochra canadensis*) emerged from cages in Marion County April 21 and was no problem where control methods were adhered to. STRAWBERRY APHID (*Pentatrichopus fragaefolii*) was unusually abundant early in the season in Multnomah County plantings, but dropped off sharply in late summer. ORANGE TORTRIX (*Argyrotaenia citrana*) was moderate on blackberries and boysenberries in Marion County on May 29, and caused some damage to raspberry plantings in Linn County and boysenberry plantings in Yamhill County, with some fruit loss in June. It was also troublesome in blackberry plantings in Marion County August 8. STRAWBERRY LEAF ROLLER (*Ancyliis comptana fragariae*) required control in Polk County in early August. CYCLAMEN MITE (*Steneotarsonemus pallidus*) was found in 19 of 196 strawberry fields surveyed in Willamette Valley during September and October; most fields were lightly infested. These were the first known infestations in commercial plantings in the State.

Nut Insects: Sticky board trap surveys for WALNUT HUSKFLY (*Rhagoletis completa*) in walnut growing areas of the State were negative. Unusual infestations of walnut by CODLING MOTH were reported from Eugene, Medford and Salem late in the season. A LEAF ROLLER (*Archips rosana*) populations remained low in most areas throughout the season. First adults were observed June 27 in the Willamette Valley. FILBERTWORM (*Melissopus latiferreanus*) emerged June 25 in Benton County, the earliest in 11 years. Infestations were spotty (lower than in 1957) in the Willamette Valley. APPLE MEALYBUG (*Phenacoccus aceris*) is of increasing concern to filbert growers in the Gervais area. Populations increased and reduction of yield was evident in a few orchards. Crawlers were first observed February 16. Egg-laying observed April 14 and by July 11, nymphs were observed feeding on foliage. FAIL WEBWORM (*Hyphantria cunea*) was abundant, with 4-6 tents common per walnut tree in the Salem area July 27. Filberts, apples and other fruit trees were infested in the Willamette Valley, particularly in poorly kept orchards.

Truck Crop Insects: LYGUS BUGS (*Lygus* spp.) were abundant in Umatilla County sugarbeet fields May 1. Controls were applied intermittently through the year. Over-all damage by ONION MAGGOT (*Hylemya antiqua*) was light throughout the State. BEAN APHID (*Aphis fabae*) built up near Jefferson and other Willamette Valley bean growing areas in early July and dropped below economic levels by late July. SLUGS caused severe damage to several bean plantings in Linn and Marion Counties the week of July 13, necessitating replanting. Corn foliage was also injured in Benton County. PAINTED-LADY (*Yanessa cardui*) was present in outbreak proportions during 1958. Large flights were observed in Linn County in mid-May. In June infestations were general on truck crops and wild host plants throughout the State. Beans, peas and mint were damaged in particular. CUTWORMS (*Peridroma margaritosa* and *Agrotis ypsilon*) were abundant in the Willamette Valley, doing economic damage in late June and early July. Corn, beans, mint and beets were seriously damaged in some areas. GREEN PEACH APHID (*Myzus persicae*) required

control in potato seed acreages of Klamath County in late June and early July. WESTERN STRIPED CUCUMBER BEETLE (Acalymma trivittata) appeared in the Willamette Valley for the first time since 1947, infesting a small planting of squash and cucumbers in Benton County. WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata) continued serious on truck crops, home gardens and flower beds, with some alfalfa and peach fruit injury in Yamhill County. Bean plantings in the Willamette Valley were heavily attacked. BEET ARMYWORM (Laphygma exigua) appeared in large numbers from Columbia County south to Jackson County. A variety of crops were attacked. Damage was first observed in late July when large acreages of kale and beets were severely damaged in Benton County. In mid-August, a second generation appeared and damage continued until September 6. CABBAGE APHID (Brevicoryne brassicae) adults and nymphs injured broccoli and young cauliflower plantings in the Gresham-Woodburn-Hillsboro areas August 1-10. Populations built up gradually on the fall crop, were moderate and general August 18-26, and, despite control practices, high populations existed into early September. CABBAGE LOOPER (Trichoplusia ni) infestations so severe as to resist control through July-August and early September existed in Washington, Multnomah and Marion Counties during 1958. Populations on cauliflower and broccoli were higher than those noted for several years. At the same time and location, DIAMONDBACK MOTH (Plutella maculipennis) was moderate but persisted until cauliflower and broccoli were harvested. Controls were only fair. IMPORTED CABBAGEWORM (Pieris rapae) was moderate, resisted controls. TWO-SPOTTED SPIDER MITE built up in late summer on many crops including hops, corn and gooseberries in the Willamette Valley. The spring survey to determine the overwintering population of BEET LEAFHOPPER (Circulifer tenellus) in Morrow and Umatilla Counties began April 15. The over-all mean population for the 220 square foot samples taken was .165 per square foot, considerably smaller than the 1.31 recorded in 1957. More attention needs be directed to breeding areas immediately adjacent beet fields, as roadbanks, ditches, pathways and otherwise disturbed areas support a large population on wild hosts. In addition, volunteer sugar beets in the fields are heavily infested and pose an immediate threat to the emerging new planting. Surveys made in the 4-6 leaf stage on May 1 in the Hermiston area averaged 1-2 beet leafhoppers per linear foot of row. Late season estimates show curly top loss varied with location and time of planting. Ten percent loss to curly top virus disease was common in several Umatilla County sugar beet fields.

Ornamental and Shade Tree Insects: HOLLY LEAF MINER (Phytomyza ilicis) infested a large commercial planting of holly in Portland for the first time. Surveys show no increase in the known infested area of the State, but known infestations generally increased over 1957. ELM LEAF BEETLE (Galerucella xanthomelaena) infested elm throughout the State. POPLAR AND WILLOW BORER (Sternonchus lapathi) heavily damaged willow and poplar in Benton County. FOREST TENT CATERPILLAR (Malacosoma disstria) and WESTERN TENT CATERPILLAR (M. pluviale) emerged in the Willamette Valley by April 20. Infestations on agricultural crops were negligible. Considerable defoliation occurred in host trees along river banks and sloughs.

Beneficial Insects: A SEED INFESTING WEEVIL (Apion ulicis) was released at four new sites, two each in Lane and Curry Counties. This weevil was introduced in 1955 to aid in the control of the gorse plant. Inspection of original release sites in Coos County disclosed huge populations present but still restricted to small areas. KLAMATHWEED BEETLES (Chrysolina spp.) show good control of the host weed in all areas of the State. Considerable western acreage is now completely free of the weed. An ALKALI BEE (Nomia melanderi) activity began a month early, ceased a month early.

Household Insects: A SUBTERRANEAN TERMITE (Reticulitermes hesperus) and a DAMPWOOD TERMITE (Zootermopsis angusticollis) are becoming more serious each year. This is partly related to the type of modern home construction that permits easy access and favorable conditions for termite development. CARPET BEETLES appear on the increase as house pests. Other insects troublesome in homes are INDIAN-MEAL MOTH, POWDER POST BEETLES, CLOVER MITE, PLANT BUGS, a WEEVIL (Trachyploeus bifoveolatus) and BROWN-BANDED ROACH. This last named insect is becoming more generally distributed over the State.

Stored-grain Pests: Total of 228 inspections, initial and repeat, were made for KHAPRA BEETLE during 1958 with negative results. Common pests of stored grains and grain products found were the CADELLE, GRANARY MITE (Glycyphagus destructor), GRAIN MITE (Acarus siro), SAW-TOOTHED GRAIN BEETLE, FLAT GRAIN BEETLE, GRANARY WEEVIL and MEDITERRANEAN FLOUR MOTH. LESSER GRAIN BORER was found in one grain establishment in Grants Pass and two in Ontario.

SUMMARY OF INSECT CONDITIONS - 1958

WYOMING

Prepared by Arlen D. Davison

Highlights: BEET WEBWORM caused the most concern to farmers and ranchers this year. COTTONY MAPLE SCALE was found in two counties of the State. EUROPEAN EARWIG (Forficula auricularia) was found for the first time at Cheyenne, Laramie County.

Cereal and Forage Insects: ALFALFA WEEVIL (Hypera postica) caused moderate damage to alfalfa on the elk refuge in Teton County during June and early July and minor damage to second-cutting alfalfa in Goshen and Lincoln Counties during July. During mid-August populations averaged 30 larvae per 20 sweeps in several fields in northern locations while in others only 2-3 larvae were found. LESSER CLOVER LEAF WEEVIL (Hypera nigrostris) caused moderate damage to red clover hay in Teton County, on a limited scale in Park County. BEET WEBWORM (Loxostege sticticalis) adults were very abundant in Goshen County in late June but the expected larval population did not develop. Larvae were extremely abundant but restricted feeding to fanweed, lupine, lambsquarters and other weeds in Teton County, caused extensive damage to several bean fields and radish fields during July in Park County, severely damaged sugar beets in the Worland area, although control measures were applied, and destroyed several new alfalfa plantings in Sweetwater and Lincoln Counties. PEA APHID (Macrosiphum pisi) populations varied greatly throughout the season, with 150-200 per 10 sweeps in alfalfa throughout the State in August. During the week of September 12, many western alfalfa fields had as high as 750-800 per 10 sweeps. A heavy infestation retarded growth of second-cutting alfalfa in Platte County. CORN LEAF APHID (Rhopalosiphum maidis) was present throughout the southeastern section from August 1 to September 25, with minor damage reported. HESSIAN FLY (Phytophaga destructor) caused an estimated 2 percent loss of winter wheat in the northeastern part of the State. VARIEGATED CUTWORM (Peridroma margaritosa) caused minor damage in two alfalfa fields in Goshen County during September. An outbreak of MORMON CRICKET (Anabrus simplex) occurred near Casper, Natrona County, the week of July 4. Movement was confined to foothills and rangeland. No serious damage was reported. WHEAT CURL MITE (Aceria tulipae) - Wheat streak mosaic caused moderate losses in isolated areas

in the spring and in the fall was observed in isolated eastern areas. Efforts to collect the vector have thus far failed but it is undoubtedly present. GRASSHOPPERS caused severe damage to hay and crops in the Mill Creek area northeast of Lander during July and August. The most important species present were Melanoplus packardii, M. bivittatus, Camnula pellucida and nymphs and adults of M. femur-rubrum. M. bivittatus, M. bilituratus and M. femur-rubrum damaged winter wheat in the Albin area, Laramie County, during September. Up to 12 drill rows were destroyed in some fields.

Fruit Insects: PEAR-SLUG (Caliroa cerasi) damaged sweet and sour cherry trees in Goshen and Platte Counties throughout the summer.

Truck Crop Insects: POTATO PSYLLID (Paratrioza cockerelli) populations fluctuated greatly throughout the growing season. Population averaged 8 per 50 sweeps in Cheyenne on June 27 and 44 on matrimonyvine forty miles to the east. None were found on early potatoes. The situation reversed with 55 per 50 sweeps at Cheyenne and 10 at Pine Bluffs on July 11. The population never averaged more than 4 per 100 sweeps on potatoes in southeastern area. The highest count in northern part of State was 10 per 50 sweeps in Washakie County. In general, control measures resulted in very little damage. MEXICAN BEAN BEETLE (Epilachna varivestis) was first observed during the week of June 27 in southeastern Wyoming. By August 1, the population averaged 2 adults and 4 larvae per 100 sweeps in Laramie, Goshen and Platte Counties, with light damage occurring. During the last of August and early September beetles completely defoliated many fields in Goshen County. BEET LEAFHOPPER (Circulifer tenellus) infected several sugar beet fields with the curly top virus in Platte and Converse Counties during early August. The insect was not collected but the resulting disease caused a 20 percent loss in some fields in Platte County and a 1-2 percent loss in Converse County.

Forest, Ornamental and Shade Tree Insects: COTTONY MAPLE SCALE (Pulvinaria innumerabilis) was found in two isolated areas during the summer. It is fairly numerous in Torrington, Goshen County, and was found in one yard in Worland, Washakie County. To date these are the only areas in the State in which it has been found. OYSTERSHELL SCALE (Lepidosaphes ulmi), EUROPEAN ELM SCALE (Gossyparia spuria) and PINE NEEDLE SCALE (Phenacaspis pinifoliae) were common on shade trees and shrubs throughout the State. All have resulted in loss of many yard trees and shrubs.

Insects Affecting Man and Animals: Control programs for CATTLE GRUBS (Hypoderma lineatum and H. bovis) are progressing well. In Sheridan County 1-2 percent of the horses used by several dude ranches were infested with grubs.

Miscellaneous Insects: Several specimens of EUROPEAN EARWIG (Forficula auricularia) were found for the first time in Laramie County.

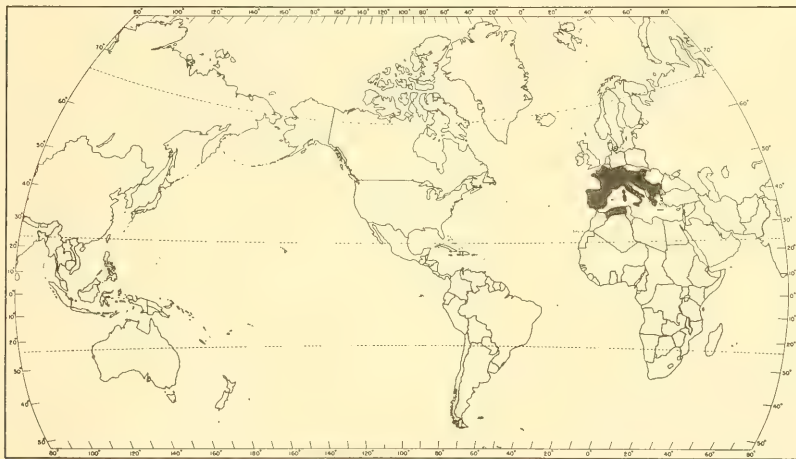
INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

CHESTNUT WEEVIL (Curculio elephas (Gyllenhal))

Economic Importance: This curculio is one of the most serious pests of chestnuts in Europe. The larvae feed in the nuts, often completely destroying them. Additional injury is caused by the adults which puncture the base of the young nuts to feed, causing a premature nut fall as high as 20 percent of the crop in some instances. In Bulgaria it sometimes damages 70 percent of the crop. Larvae of this pest have been intercepted frequently at U. S. ports of entry in past years in chestnuts from Europe.

Distribution: Recorded in Italy, France, Austria, Germany, Greece, Bulgaria, Algeria, Spain, Lebanon, Yugoslavia, Portugal, Hungary and Switzerland.

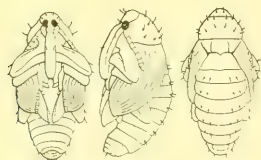
Hosts: Chestnuts and acorns.



General Distribution of Curculio elephas (Gyllenhal)

Life History and Habits: The adults are present from mid-July till October in France. The eggs are deposited singly in little holes made in the fruit. Each female will lay approximately 20 eggs. Larvae enter the cotyledons, their entrance holes rapidly becoming invisible. The presence of larvae in chestnuts is very difficult to detect. Larvae leave chestnuts in about 40 days after the eggs are laid, and enter the soil, where they pass the winter, and pupate about mid-June. Occasionally pupation and adult emergence occur in the nuts. Infested fruits usually fall prematurely and are often attacked by fungi.

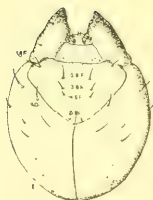
Description: The rostrum of the female is as long as the body and twice as long as that of the male. The tarsus is long and slender and the dorsal side is uniformly composed of lanceolate yellowish or grayish scales. Antenna is very long and thin and covered with pubescence. The eyes are large. The general color of the weevil is russet with an ashen overcast from a dense pubescence. Length 6-9 mm. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies and the U. S. N. M.) CEIR 8 (50) 12-12-58



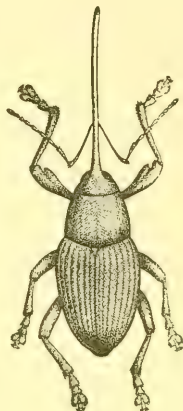
A



B



D



C



E

Figures of Curculio elephas (Gyll.) : A-pupa; B-mature larva; C-adult; D-head of mature larva; E-lateral-half of metathorax, mature larva.

Figures (except map): Adult, larva and pupa from Colizza, C. 1928-1929. Bol. del Lab. di Zool. Generale e Agraria 22:244-262. Larval head and lateral-half of metathorax from La Ferla, A. 1945. Bol. R. Lab. Ent. Agrar. Portici 5:308-311.

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Cooperative
ECONOMIC INSECT
REPORT

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AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

★ ★ ★ ★ ★
Season's Greetings
★ ★ ★ ★ ★

Highlights of Insect Conditions

BOLL WEEVIL hibernation survey in North Carolina, South Carolina and Virginia shows lower populations than in 1957. (p. 1008).

INSECT DETECTION: A weevil (Brachyrhinus meridionalis) new to Washington. (p. 1008). An ant (Cardiocondyla nuda minutior) reported from California for the first time. (p. 1009).

SUMMARY OF INSECT CONDITIONS - 1958 - Maine (p. 1010), Delaware (p. 1012).

INSECTS not known to occur in the United States. (p. 1017).

WEATHER BUREAU 30-DAY OUTLOOK

MID-DECEMBER 1958 TO MID-JANUARY 1959

The Weather Bureau's 30-day outlook for the period mid-December to mid-January calls for temperatures to average below seasonal normals over the eastern half of the nation except for near normal in the Florida Peninsula. Above normal temperatures are expected to prevail west of the Continental Divide. In the intervening area of the Central Plains about normal averages are in prospect, but with large variations about the normal. Precipitation is expected to equal or exceed normal east of the Appalachians, along the Gulf Coast, and over the eastern Great Lakes. In central and northern portions much of this will be in the form of snow. Equal or above normal amounts are also expected over the Pacific Northwest and in the Central and Northern Plains. In the remainder of the country subnormal precipitation is anticipated.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D. C. Price \$4.80 a year, \$2.40 a half year.

WEATHER OF THE WEEK ENDING DECEMBER 15

Extreme cold and widespread snowfall featured the week's weather east of the Continental Divide, while unseasonably mild temperatures continued in the Far West as drought and a high fire hazard plagued parts of California. Heavy precipitation during the week was limited mostly to the Southeast and East Coast and the Pacific Northwest. As southward creeping Arctic air hovered over most of the North American Continent, temperatures remained far below normal levels throughout the week in northern areas east of the Divide and in southern areas the latter part. In the Great Lakes region and upper Mississippi Valley, temperatures, below the zero mark most nights and even during some days at a few stations, averaged as much as 26° below seasonal levels for the week. Although few new extreme low temperature records were reported, lows ranging from zero to a few degrees above in Oklahoma were the lowest at many stations for December in 30 years, and the mercury touched the zero mark at Hartford, Connecticut, the earliest on record. For New England, the first half of December rates among the coldest in 48 years. A low of -19° at Wabash, Indiana, on the 10th was the second lowest ever recorded in that State so early in December; the lowest was -30° at Marengo on the same date in 1917. Some other lows reported from extreme northern areas included -34° at International Falls, Minnesota, on the 10th; -23° at Lone Rock, Wisconsin, on the 13th; and -22° at Newport, Vermont, on the 11th. Following a weekend cold wave in Louisiana and Texas, temperatures dropped below freezing, except in the lower Rio Grande Valley where freezing was prevented by a cloud cover. Freezing was general over Mississippi, Alabama, Georgia and northern Florida on 1 or 2 days.

Precipitation in most areas east of the Rockies, owing to low temperatures, fell as snow. The main snowfall occurred during a coastal storm on the 11th and 12th. Some snow was reported in all the Southern States, but the most remarkable falls occurred in the eastern Carolinas and Virginia where 7-8 inches covered extensive areas, with extreme amounts of 16-18 inches in north central and northeastern North Carolina. Amounts tapered off to a few inches farther north. At the end of the week, 1-9 inches of snow still covered most sections of the eastern Seaboard States from the Carolinas northward. In the midcontinent area a 1 to 4-inch cover extended over the northern half of

CEREAL AND FORAGE INSECTS

GREENBUG (Toxoptera graminum) - TEXAS - Infestations observed in most of pan-handle area (Daniels), averaged 10 per linear foot in one area of Carson County (Turney), and some damage to oats observed in Van Zandt County. (Davis).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Populations continued heavy on alfalfa in Payne County despite sub-freezing weather. (Bryan). TEXAS - Light, widespread infestations on alfalfa in Rockwall County. Weather checked a buildup for the present. (Davis).

APHIDS - SOUTH CAROLINA - Unusually abundant on oats and infesting barley in Anderson County. (Nettles et al.).

FRUIT INSECTS

CODLING MOTH (Carpocapsa pomonella) - CALIFORNIA - Larvae light on pear trees in Ophir, Placer County. (Cal. Coop. Rpt.).

A LOOPER (Anacamptodes fragilaria) - CALIFORNIA - Medium to heavy on navel orange trees in Redlands area, San Bernardino County, with 100-300 per tree on 80 acres of oranges. (Atkins).

NAVEL ORANGEWORM (Paramyelois transitella) - CALIFORNIA - Heavy in walnuts in Sacramento, Sacramento County. Heavy in old peach fruit and light in walnuts in Marysville, Yuba County. (Cal. Coop. Rpt.).

CALIFORNIA RED SCALE (Aonidiella aurantii) - TEXAS - Attacked lemon trees in Calhoun County. (Garner).

PEAR PSYLLA (Psylla pyricola) - CALIFORNIA - Reported on pear trees in the Newcastle area of Placer County. (Cal. Coop. Rpt.).

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - Specimens taken from traps in the Los Gatos, Santa Clara and San Jose areas of Santa Clara County. (Cal. Coop. Rpt.).

GRAPE ERINEUM MITE (Eriophyes vitis) - CALIFORNIA - Caused concern to growers in Lodi area, San Joaquin County, with as much as 25-30 percent damaged spurs in some vineyards. (Cherry).

TRUCK CROP INSECTS

A CUTWORM (Proxenus mindara) - CALIFORNIA - Caused some damage to cantaloup in the Los Banos area, Merced County. (Cal. Coop. Rpt.).

A STRAWBERRY CROWN MOTH (Ramosia sp., prob. bibionipennis) - CALIFORNIA - Medium on bushberries in Santa Cruz, Santa Cruz County. (Cal. Coop. Rpt.).

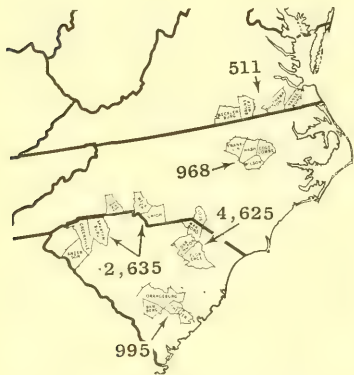
A LEAFHOPPER (Draeculacephala minerva) - CALIFORNIA - Adults light on lettuce plantings in Brawley area of Imperial County. (Cal. Coop. Rpt.).

ONION THRIPS (Thrips tabaci) - TEXAS - Averaged less than one per plant on newly set onions in Dimmit County. (Harding).

SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons) - TEXAS - Medium and widespread in Dimmit County. Aster yellows on carrots severe in spots. (Harding).

COTTON INSECTS

Boll Weevil Hibernation Survey in South Carolina, North Carolina and Virginia - 1958. The same five areas in these States were sampled from November 17 to



Averages by Area

December 4 as in the fall of 1957, with 3 samples of 2 square yards each being taken at each of 30 locations (farm sites) per area. Area 1 consisted of Orangeburg, Bamberg and Dorchester Counties, South Carolina, and averaged 995 live boll weevils per acre, as compared with 3,978 for 1957. Area 2, consisting of Florence, Darlington and Marlboro Counties, South Carolina, and Scotland County, North Carolina, averaged 4,625 per acre, as compared with 11,374 for 1957. Area 3, composed of Anderson, Greenville and Spartanburg Counties, South Carolina, and Mecklenburg, Cleveland and Union Counties, North Carolina, averaged 2,635 live boll weevils per acre, as compared with 6,752 for 1957. Area 4, comprised of Edgecombe, Franklin, Nash and Wilson Counties, North Carolina, averaged 968 live boll weevils per acre, as compared with 2,205 for 1957. Area 5, composed of Brunswick, Mecklenburg, Nansemond and Southampton Counties, Virginia, averaged 511 live boll weevils per acre, as compared with 3,335 for 1957. (Ent. Res., PPC, Coop. States).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

PINE REPRODUCTION WEEVIL (*Cylindrocopturus eatoni*) - CALIFORNIA - Increasing damage reported to 140-acre plantation in Stanislaus National Forest in Sonora area, Stanislaus County, with as many as 10-20 trees per acre being killed. (Fowler).

A WEEVIL (*Brachyrhinus meridionalis*) - WASHINGTON - Specimens collected on privet hedge in Yakima constitute first record for the State. Det. R. E. Warner. (Brunson).

A ROOT BORER - LOUISIANA - Destroyed nursery stocks of *Magnolia grandiflora* in Covington area. (Spink).

APHIDS - MARYLAND - *Macrosiphum rosae* heavy on roses at Adelphi, Prince Georges County, November 27. (U. Md., Ent. Dept.). CALIFORNIA - *Hyalopterus arundinis* heavy on bamboo in Brawley, Imperial County. (Cal. Coop. Rpt.).

SOUTHERN RED MITE (*Oligonychus ilicis*) - LOUISIANA - Medium on commercial plantings of azalea and holly in Covington area. (Spink).

TWO-SPOTTED SPIDER MITE (*Tetranychus telarius*) - OKLAHOMA - Moderate to heavy on carnations, chrysanthemums, pepper plants, roses and abelia in northeastern part of State. (Price). Found on chenille plant in Oklahoma City area. (Latham).

WALNUT SCALE (*Aspidiotus juglans-regiae*) - CALIFORNIA - Medium on Lombardy poplar trees in El Cajon area, San Diego County. (Cal. Coop. Rpt.).

INSECTS AFFECTING MAN AND ANIMALS

CATTLE LICE - UTAH - Cattle in Fielding feed yards and on range in western Box Elder County severely infested. (Knowlton).

STORED-PRODUCT INSECTS

Stored-grain Insect Situation in Nebraska - Examination of 51 samples of corn submitted by CCC area supervisors during November showed insects present in 25.6 percent and rodent contamination in 51.9 percent of the bins examined. All insect populations were light. (Kantack).

MISCELLANEOUS INSECTS

A COTTON STAINER (*Dysdercus andreae*) - FLORIDA - Numerous adults and immature forms collected on seaside mahoe at Key West, Monroe County. This species has not previously been reported in large numbers from the State. (Woodruff, Swanson, Dowling).

EARWIGS - LOUISIANA - Heavily infested slab homes in Jefferson and Orleans Parishes. (Spink).

AN ANT (*Cardiocondyla nuda minutior*) - CALIFORNIA - Medium in a concrete terrace in San Diego, San Diego County. This is the first report of this ant from the State. Det. M. R. Smith. (Cal. Coop. Rpt.).

MILLIPEDES - LOUISIANA - Heavily infested yards and driveways in Baton Rouge. (Spink).

LIGHT TRAP COLLECTIONS

	<i>Pseudaletia</i> unipuncta	<i>Agrotis</i> ypsilon	<i>Feltia</i> subterranea	<i>Heliothis</i> zea
FLORIDA				
Gainesville 12/3-10	4	6		2
Quincy 12/2		1		10
LOUISIANA				
Baton Rouge 12/5-11	26	22	23	
NEBRASKA				
Lincoln 10/20-11/25	34	4		442
SOUTH CAROLINA				
Charleston 12/1-7	20	40	30	1

SUMMARY OF INSECT CONDITIONS - 1958

MAINE

Reported by L. W. Boulanger and R. W. Paulson

Cereal and Forage Insects: A STALK BORER (probably Papaipema nebris) was moderate to severe on untreated corn in Aroostook County. APHIDS caused light damage to oats in Orono, Hartland and southern Aroostook. A WEEVIL (Stomodes gyrosicollis) attacked field crops in the Augusta area. Light infestations and damage by EUROPEAN CORN BORER (Pyrausta nubilalis) occurred in several localized instances. CORN EARWORM (Heliothis zea) was light throughout the State and only one case of light injury was reported. ARMYWORMS caused moderate injury to millet in Androscoggin County and severe damage to one planting in Cumberland County. Several species of CUTWORM adults were taken in large numbers in light traps in the Augusta area but infestations did not develop in proportion.

Fruit Insects: APPLE MEALYBUG (Phenacoccus aceris) infestations continued to increase in many areas; orchards in Waldo and Franklin Counties were particularly hard hit. On the other hand, infestations in northern Androscoggin County began declining from the 1957 level. Natural causes are believed responsible for this decrease. APPLE APHID (Aphis pomi) populations were rather heavy throughout the State although parasitism was surprisingly high in late July. TWO-SPOTTED SPIDER MITE (Tetranychus telarius) infestations were heavy in early season in York County but were kept below injurious levels in most areas by the wet, cool season until late August. EUROPEAN RED MITE (Panonychus ulmi) numbers did not build up to appreciable levels at any time during the season. CODLING MOTH (Carpocapsa pomonella) incidence was about half that of 1957 in trouble areas. APPLE MAGGOT (Rhagoletis pomonella) emergence was considerably delayed and peak emergence was well beyond that of 1957. Infestations in many orchards were moderate and several orchards suffered severe damage. BLUEBERRY INSECTS were generally low in numbers. Most injurious was a THRIPS (Frankliniella vaccinii), moderate infestations of which caused moderate to severe injury in numerous areas in Knox and Lincoln Counties and light infestations of BLUEBERRY MAGGOT (Rhagoletis pomonella) caused light to moderate damage in Washington County. GEOMETRIDS caused light injury to blueberry plants in York and Washington Counties and BLACK ARMY CUTWORM (Actebia fennica) injury was generally low. CYCLAMEN MITE (Steneotarsonemus pallidus) infestations reached high levels early and caused severe crop reductions in many producing areas. Particularly hard hit were sections in Penobscot and Washington Counties. TWO-SPOTTED SPIDER MITE numbers built up early in the latter county; grower control was good with no recurrence during remainder of the season.

Truck Crop Insects: All insects were generally light and damage of little consequence. Among those causing other than just noticeable injury were the following: SPINACH LEAF MINER (Pegomya hyoscyami) caused moderate damage to spinach in the Orono and Hermon areas. ROOT MAGGOTS (probably Hylemya spp.) damage was unusually severe in several vegetable plantings on or near Aroostook Farm. SEED-CORN MAGGOT (Hylemya cilicrura) caused moderate damage to spinach in Cumberland County. A STALK BORER (Papaipema sp.) caused moderate injury to tomatoes in Androscoggin County. Dry and snap beans in the Monmouth area and snap beans in the Hartland section were moderately damaged by MEXICAN BEAN BEETLE (Epilachna varivestis). Infestations of LETTUCE ROOT APHIDS were about the same as 1957. Heaviest infestations continued to be found in Cape Elizabeth area. POTATO INSECTS were low in density, APHIDS (BUCKTHORN, Aphis abbreviata;

POTATO, Macrosiphum solanifolii; GREEN PEACH, Myzus persicae; FOXGLOVE, Myzus solani) and POTATO FLEA BEETLE (Epitrix cucumeris) were slow in developing and peak numbers were much later and smaller than in 1957. Aphid development was also slowed by fungus diseases, parasites and predators. (W. A. Shands, U.S.D.A. and M.A.E.S. staff). TARNISHED PLANT BUG (Lygus lineolaris) injury on raspberries was generally light throughout the State but several areas experienced moderate to severe injury in localized plantings.

Ornamental Insects: For the most part, infestations and damage were light. ROSE CHAFER (Macrodactylus subspinosus) caused moderate injury to a variety of plants in southern Maine and infestations of a GARDEN SLUG caused severe damage to ornamentals in the Portland and Bar Harbor areas. EUROPEAN EARWIG (Forficula auricularia) infestations were heavy in Portland and South Portland causing severe damage to flowering plants. This insect has moved very rapidly north and east in the State; specimens have been recovered in Bar Harbor, Camden, Augusta and Orono. GLADIOLUS THRIPS (Taeniothrips simplex) caused severe injury in Portland and vicinity; also present in moderate numbers in most commercial plantings in Androscoggin and Oxford Counties but damage in these cases was light.

Forest and Shade Tree Insects: (R. W. Nash, Maine Forest Service, Augusta): EASTERN TENT CATERPILLAR (Malacosoma americanum) and GYPSY MOTH (Porthetria dispar) infestations were light. PINE LEAF APHID (Pineus pinifoliae) occurred in outbreak level in eastern and western Maine; damage was moderate to severe. BALSAM GALL MIDGE (Itonida balsamicola) caused moderate damage to balsam fir in eastern sections of the State and BALSAM WOOLLY APHID (Chermes piceae) caused moderate injury in some localized trouble areas. BIRCH LEAF MINER (Fenusa pusilla) occurred in statewide outbreak proportions on gray birch; damage was severe when trees were of ornamental value. YELLOW-HEADED SPRUCE SAWFLY (Pikonema alaskensis) increased in southern Maine after several years of scarcity. There was a LARCH SAWFLY (Pristiphora erichsonii) outbreak in Sorrento, with severe local damage. WHITE-PINE WEEVIL (Pissodes strobi) was generally moderate on white pine and spruce; damage moderate. PINE BARK APHID (Pineus strobi) infestations were generally very heavy on white pine with light damage. Aircraft spraying for SPRUCE BUDWORM (Choristoneura fumiferana) on 300,000 acres in northern Maine gave high degree of control in preliminary evaluation. Populations in neighboring unsprayed areas did not decrease as much as expected. Washington County infestations dropped considerably due to high parasitism; parasites were collected and transferred from Aroostook County. The only reported case of trouble from the spraying in northern Aroostook County involved a sick horse which a veterinarian later diagnosed as heart trouble and old age.

Insects Affecting Man and Animals: ELM LEAF BEETLE (Galerucella xanthomelaena) and CLOVER MITE (Bryobia praetiosa complex) caused some annoyance judging from inquiries received in Orono. PUNKIES (probably Culicoides spp.) and BLACK FLIES (Simulium spp.) were very annoying on inland waters and streams. Several flocks of sheep suffered light to moderate damage from SHEEP KED (Melophagus ovinus) infestations. This pest has been increasing in abundance in the State over the past three years.

Miscellaneous Insects: Infestations and damage by a TIMBER BEETLE were moderate in the Wells and Belgrade areas. A CARPENTER ANT (probably Camponotus herculeanus pennsylvanicus) caused moderate damage in camp timbers throughout the State. A heavy infestation of a FUNGUS BEETLE (Typhaea stercorea) was found in a barn in St. Albans; damage was undetermined.

SUMMARY OF INSECT CONDITIONS - 1958

DELAWARE

Prepared by Paul P. Burbutis and Marlin S. Conrad

Highlights: EUROPEAN CORN BORER noticeably increased over 1957 with highest losses ever recorded in peppers. CORN EARWORM was particularly abundant and caused considerable local injury to untreated sweet corn and peppers. GREEN CLOVERWORM populations were very high, especially on soybeans. ALFALFA WEEVIL remains the number one pest on alfalfa with control measures mandatory for economic yields. IMPORTED CABBAGEWORM and CABBAGE LOOPER were major pests on crucifers statewide. COLORADO POTATO BEETLE on potatoes and tomatoes, TOBACCO HORNWORM on tomatoes, ASPARAGUS BEETLE on asparagus, SALT-MARSH CATERPILLAR on a variety of crops and PEA APHID on peas were important pests. CELERY LOOPER on carrots, PAINTED-LADY on soybeans, BULB FLY (Eumerus stigmatus) on carrots, WILLOW SAWFLY on willow, an OAK SAWFLY (Caliroa lineata) on pin and red oak, a WHITE FLY (Aleurochiton forbesii), a LEAFHOPPER (Typhlocyba modesta) on red maple, a GALL MIDGE (Dasyneura gleditschiae) on Moraine locust and an APHID (Myzocallis tiliacae) on linden, were all encountered for the first time as possible new pests in the State. Some have previously been reported either as pests of different host plants or with no host information.

Cereal and Forage Insects: EUROPEAN CORN BORER (Pyrausta nubilalis) mortality of overwintering borers averaged 22 percent, 10 percent lower than spring of 1957. Pupation approached 50 percent in Sussex County by the last week of April and by May 20th adults were numerous. Fall abundance survey and weekly inspections indicate a continuing of the general increasing trend in abundance. Despite this, corn yields for 1958 reached a record high. The fall survey averaged 249 borers per 100 plants, compared with 90 in 1957. PEA APHID (Macrosiphum pisi) attained much higher proportions in alfalfa and clover than in 1957. First found in alfalfa March 8th, populations reached a peak by late May and early June. They decreased until August when a definite increase was noticeable and by early September were again numerous statewide. ALFALFA WEEVIL (Hypera postica) larvae became fairly common throughout the State by the third week of March. Highest larval populations occurred from mid-April to July with an apparent but smaller second peak occurring during August. Some mature larvae were picked up as late as November. Highest adult populations occurred during June and July. Injury was noticeable throughout the State in untreated fields in May. MEADOW SPITTLEBUG (Philaenus leucophthalmus) was common on alfalfa and clovers throughout the season but caused serious injury. GREEN CLOVERWORM (Plathypena scabra) was rather abundant in soybeans, alfalfa and clover. Injury did not noticeably reduce yields. CORN EARWORM (Heliothis zea) caused very light injury to soybeans, fed quite prevalently in ears of field and sweet corn with losses mostly in untreated sweet corn, and remained rather common in clover and alfalfa during the late summer. ARMYWORM (Pseudaletia unipuncta) caused some injury to late field corn in Sussex County but corn was able to outgrow the injury. Barley was most common host during early season. Numerous on alfalfa and clover during late June and July. VELVETBEAN CATERPILLAR (Anticarsia gemmatilis) was generally scarce. FALL ARMYWORM (Laphygma frugiperda) was common on late field corn and alfalfa throughout the State causing only light injury. GARDEN WEBWORM (Loxostege similalis) was first found in alfalfa in Kent County during July, but remained scarce until August when it became common in some fields of alfalfa throughout the State. No serious injury recorded. CLOVER ROOT CURCULIO (Sitona hispidula) adults decreased on alfalfa and clovers with very little injury noticeable.

JAPANESE BEETLE (Popillia japonica) very much decreased on alfalfa, clover and corn. Somewhat common on soybeans in early summer but decreased rapidly, with no serious injury. DUSKY SAP BEETLE (Carpophilus lugubris) remained more prevalent in Sussex County than in northern regions. Injury was never extensive. CORN FLEA BEETLE (Chaetocnema pulicaria) infested corn throughout the season, apparently never reached serious proportions. POTATO LEAFHOPPER (Empoasca fabae) increased gradually on alfalfa but was generally not dangerous. Also somewhat common on red clover and soybeans. CORN LEAF APHID (Rhopalosiphum maidis) was first noted in Sussex County the first of July, rapidly increased by late July, and by the second week of August was prevalent throughout the State, but markedly decreased by end of August. TARNISHED PLANT BUG (Lygus lineolaris) was very abundant in alfalfa, clover and soybeans. STALK BORER (Papaipema nebris) was common along border rows of field corn statewide in late June. SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) remained common in most forage crops through the first of November. BLACK CUTWORM (Agrotis ypsilon) caused noticeable injury in some corn fields. STRAWBERRY SPIDER MITE (Tetranychus atlanticus) caused some injury to soybeans in late summer in eastern Sussex County but was greatly reduced compared with 1957. SALT-MARSH CATERPILLAR (Estigmene acrea) was common most of the summer statewide on soybeans but no control was necessary. CLOVER HEAD CATERPILLAR (Grapholitha interstinctana) became prevalent in red clover in some fields. CLOVER LEAF WEEVIL (Hypera punctata) was common in clover and alfalfa the first of April but diminished rapidly. PAINTED-LADY (Vanessa cardui) fed on soybeans, late June in Sussex County. BEAN LEAF BEETLE (Cerotoma trifurcata) caused slight injury to soybeans in late summer. ALFALFA CATERPILLAR (Colias philodice eurytheme) was statewide on alfalfa but most common in Sussex County with 3-4 per 10 sweeps during early August. LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) did not reach economic proportions in clover or alfalfa. BLISTER BEETLES (Epicauta spp.) were common in fields of alfalfa mostly in the northern half of State. ENGLISH GRAIN APHID (Macrosiphum granarium) was common on cereal crops as early as March 8 in Kent and Sussex Counties and was found on winter rye cover crop in late October. CLOVER LEAFHOPPER (Aceratagallia sanguinolenta) became fairly common on clover during late April but was not serious. Adults were present through October. RAPID PLANT BUG (Adelphocoris rapidus) and ALFALFA PLANT BUG (A. lineolatus) were present in small numbers on alfalfa most of the season, the former species most common.

Fruit Insects: APHIDS were generally not serious in orchards where control was applied. ROSY APPLE APHID (Anuraphis roseus) initially occurred in New Castle County in late April, later on apple foliage in Kent and Sussex Counties. APPLE APHID (Aphis pomi) was present in most orchards the first of May. WOOLLY APPLE APHID (Eriosoma lanigerum) occurred occasionally early in the season around pruning scars. STRAWBERRY WEEVIL (Anthonomus signatus) was very common early in Sussex County on strawberries. Adults caused moderate injury to flowers. RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) was most prevalent in Kent County. CODLING MOTH (Carpocapsa pomonella) adults first appeared on May 13 and on June 10 fruit entries were rather common in untreated orchards. Very light infestations of UNSPOTTED TENTIFORM LEAF MINER (Callisto geminata) occurred during June. PLUM CURCULIO (Conotrachelus nenuphar) was normal on fruit this season. PEAR-SLUG (Caliroa cerasi) infestation was very heavy on foliage of untreated cherry in June, New Castle County. EUROPEAN CORN BORER (Pyrausta nubilalis) bored in stalks and fruit of blueberries in northern Sussex County during late June. JAPANESE BEETLE (Popillia japonica) was very light on peach trees in Kent County. EUROPEAN RED MITE (Panonychus ulmi) buildup was noticeable in Sussex County apples the first of July and by late July infestations were common statewide. In early August populations were more prevalent and some apple trees showed bronzing. Some infestations also noted on peach trees. SCHOENE SPIDER MITE (Tetranychus schoenei) buildup on apples in Sussex County the first of August. Infestations were not serious in sprayed orchards.

BAGWORM (*Thyridopteryx ephemeraeformis*) nearly defoliated several young apple trees in Sussex County during late July. A heavy infestation occurred in New Castle County on raspberries in August.

Vegetable Insects: EUROPEAN CORN BORER infestation increased, being heavy on potatoes, corn and peppers. Loss of canning peppers in Kent and Sussex Counties approached 50 percent. CORN EARWORM (*Heliothis zea*) caused noticeable injury to pepper pods in August and September. IMPORTED CABBAGEWORM (*Pieris rapae*) was common statewide on all crucifers and caused considerable injury to untreated crops, as late as November. COLORADO POTATO BEETLE (*Leptinotarsa decemlineata*) caused considerable local injury to potatoes and tomatoes. HORNWORMS (*Protoparce* spp.) were common on tomatoes statewide. Most severe injury was in Sussex County in late summer. Noticeable injury also occurred to peppers in Sussex County. TARNISHED PLANT BUG was very abundant on many crops. CABBAGE LOOPER (*Trichoplusia ni*) was prevalent on crucifers, causing rather heavy injury to untreated fields. Feeding was also common on tomatoes, potatoes, peppers and beans until late summer. POTATO FLEA BEETLE (*Epitrix cucumeris*) became prevalent on potatoes causing moderate injury until mid-summer. POTATO APHID (*Macrosiphum solanifolii*) was common on potatoes and tomatoes during early summer. MEXICAN BEAN BEETLE (*Epilachna varivestis*) was common statewide with heaviest injury in home gardens. POTATO LEAFHOPPER (*Empoasca fabae*) populations on potatoes were normal. SALT-MARSH CATERPILLAR (*Estigmene acrea*) was common on lima beans and asparagus. ASPARAGUS BEETLE (*Crioceris asparagi*) fed heavily on asparagus ferns statewide and SPOTTED ASPARAGUS BEETLE (*C. duodecimpunctata*) was prevalent and apparently destroyed a large number of seeds. ASPARAGUS MINER (*Melanagromyza simplex*) was noticeable, but decreased over 1957. CABBAGE APHID (*Brevicoryne brassicae*) populations were not noticeable on cabbage and cauliflower until late summer. BEAN LEAF BEETLE (*Cerotoma trifurcata*) caused slight injury to snap beans in late August. SQUASH VINE BORER (*Melittia cucurbitae*) was destructive in small plantings of squash and HARLEQUIN BUG (*Murgantia histrionica*) was prevalent on small plantings of cabbage in Sussex County. BLISTER BEETLES (*Epicauta* spp.) were light on pumpkin-squash in Kent County and were common on carrots in New Castle County. CELERY LOOPER (*Anagrapha falcifera*) was heavy on carrots in New Castle County. CELERYWORM (*Papilio polyxenes asterius*) caused slight injury to carrots in New Castle County. SIX-SPOTTED LEAFHOPPER (*Macrostelus fascifrons*) was very common on carrots in late summer statewide. GREEN CLOVERWORM (*Plathypena scabra*) was heavy in lima beans most of the summer. GREEN PEACH APHID (*Myzus persicae*) was effectively controlled most places on peppers and potatoes. FALL ARMYWORM (*Laphygma frugiperda*) infested peppers in late summer. BLACK CUTWORM (*Agrotis ypsilon*) caused damage to tomato and pepper sets early in the season. STRIPED CUCUMBER BEETLE (*Acalymma vittata*) was prevalent on pumpkin-squash and cucumbers during mid-summer but decreased rapidly thereafter. STRAWBERRY SPIDER MITE (*Tetranychus atlanticus*) was much decreased over 1957 on lima beans. YELLOW-STRIPED ARMYWORM (*Prodenia ornithogalli*) fed very lightly on asparagus, tomatoes and lima beans. A FLEA BEETLE (*Phyllotreta cruciferae*) was noticeable early on crucifers, never reached injurious proportions. COTTON SQUARE BORER (*Strymon melinus*) fed on lima beans in Sussex County in July, with slight injury. DIAMONDBACK MOTH (*Plutella maculipennis*) infestations were common on young cabbage plants in Kent County during July. GOLDEN TORTOISE BEETLE (*Metritonia bicolor*) was very light on sweetpotatoes in Sussex County. VINEGAR FLIES (*Drosophila* spp.) became very numerous in tomato and pepper fields throughout the State during late August and early September.

Forest, Ornamental and Shade Tree Insects: BAGWORM (*Thyridopteryx ephemeraeformis*) was especially abundant throughout the State from early June to late September. MIMOSA WEBWORM (*Homodaula albizziae*) was again a major pest on mimosa and honeylocust from early July to late September. FALL WEBWORM (*Hyphantria cunea*) was most abundant in Sussex County from July to September.

WALNUT CATERPILLAR (Datana integerrima) fed extensively on walnut throughout the State during late July and August. CATALPA SPHINX (Ceratomia catalpae) infestations were very heavy on catalpa in Kent and Sussex Counties. YELLOW-NECKED CATERPILLAR (Datana ministra) was again very abundant, being very heavy on pin and red oak. EASTERN TENT CATERPILLAR (Malacosoma americanum) was statewide, but considerably less abundant than in 1957. LOCUST LEAF MINER (Chalepus dorsalis) was moderate to heavy on black locust in New Castle and Kent Counties during mid-June. WILLOW SAWFLY (Nematus ventralis) was unusually abundant on willows during August and September in Sussex County. WHITE-MARKED TUSsock MOTH (Hemerocampa leucostigma) was common to heavy statewide during mid-September on sycamore and elm. An OAK SAWFLY (Caliroa lineata) was noticeably injurious to pin and red oak in late September in New Castle County. VARIABLE OAK LEAF CATERPILLAR (Heterocampa manteo) was common to heavy on oaks in mid-July. ASIATIC OAK WEEVIL (Cyrtopistomus castaneus) caused noticeable injury to oaks throughout the State during mid-July. BUCK MOTH (Hemileuca maia) was common on oaks. A SCALE (Cryptaphyllaspis liquidambaris) was common on sweetgum in New Castle County. GREEN-STRIPED MAPLEWORM (Anisota rubicunda) fed lightly on red maple in August. SPINY OAKWORM (Anisota stigma) was light on red oak during late July in Sussex County. TULIPTREE APHID (Macrosiphum liriodendri) abundance increased over 1957 in New Castle County. SPRING CANKERWORM (Paleacrita vernata) was serious on elms during May in Sussex County. BIRCH LEAF MINER (Fenusa pusilla) remained light on birch. WEBWORMS (Salebria afflictella and Tetralopha melanogrammos) caused conspicuous injury to sweetgum in Sussex County in September. A SPIDER MITE (Oligonychus bicolor) was moderate on willow and red oak in New Castle and Kent Counties. A LEAFHOPPER (Typhlocyba modesta) was collected from red maple in October. A WHITE FLY (Aleurochiton forbesii) was moderate on red maples in New Castle County. An AZALEA CATERPILLAR (Datana major) was light on blueberry in Sussex County. A JAPANESE WEEVIL (Pseudocneorhinus bifasciatus) caused noticeable injury to azaleas in Sussex County in July and August. Probably scattered throughout the State.

Insects Affecting Man and Animals: MOSQUITOES - Aedes sollicitans and A. vexans reflected very little change over 1957. Anopheles quadrimaculatus and Culex salinarius were much more abundant than in 1957, indicative of the conditions usually encountered during an extensive wet season. HOUSE FLY (Musca domestica) was less severe generally than in 1957. AMERICAN DOG TICK (Dermacentor variabilis) was rather numerous from mid-April to mid-June. BLACK WIDOW SPIDER (Latrodectus mactans) was fairly common in various sections of the State. BROWN-BANDED ROACH (Supella supellectilium) was reported mostly from New Castle County.

Miscellaneous Insects: EASTERN SUBTERRANEAN TERMITE (Reticulitermes flavipes) was normal with most reports during the spring swarms. CLOVER MITE (Bryobia praetiosa complex) invaded homes with majority of complaints in March and April. Heaviest in New Castle County. PAVEMENT ANT (Tetramorium caespitum) swarms occurred in buildings in New Castle County during January.

Weather continued from Page 1006

Oklahoma, most of Arkansas, southwestern Missouri and northwestern Mississippi. In Upper Michigan, depths ranged up to 36 inches. Snowfall at Oswego, New York, continued to attract attention as additional falls there during the week boosted the seasonal total to date to over 80 inches, with even higher totals reported in surrounding hill areas. California's drought is reaching record proportions, as virtually no precipitation fell in the Far Southwest. Seasonal precipitation to date at San Francisco is only 10 percent of normal, the driest such period there since 1849. Only patches of snow were reported in the Sierras. Considerable precipitation fell in the Pacific Northwest, and 1-4 inches of snow covered the wheat regions of Washington State. Severe glaze occurred from Bellingham, Washington, to the Canadian Border during a brief cold snap there early in the week. The ground was frozen 12 inches deep in northern Wisconsin, and Minneapolis, Minnesota, reported 8 inches of ice in the Mississippi River. (Summary supplied by U. S. Weather Bureau).

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATESPINE MOTH (*Panolis flammea* (Denis and Schiffermuller))

Economic Importance: Pine moth is one of the most destructive insects of coniferous forests in Europe. Two successive attacks will kill a pine forest. In 1924, about 425,000 acres of forest were defoliated in northwestern Poland and northeastern Germany. This necessitated the cutting of over 400 million board feet of pine and fir in that area. Severe outbreaks have been reported in other years in Germany and in the Kharkov area of USSR, Czechoslovakia and Finland.

Distribution: British Isles, most of continental Europe and Japan.

Hosts: Pine preferred. Also attacks silver fir, Douglas-fir, spruce, juniper, European larch and some broad-leaved trees.



General Distribution of *Panolis flammea*

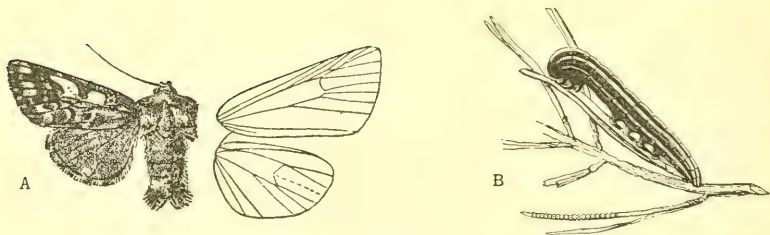
Life History and Habits: The moth is not commonly observed, being a night-flying species. Emergence occurs in March or April. The eggs are deposited in batches of 4 to 8 on pine needles of the preceeding year. Trees with dense foliage are preferred. The larval period coincides with the opening of the buds and the young growth is quickly devoured in an infestation. At a slight disturbance the larva drops to the ground by means of a silken thread. Feeding continues up to the end of July at which time the full-grown larva drops to the ground where it pupates. The winter is passed in this stage. In heavy infestations the old foliage is consumed along with the new, thereby leading to tree mortality.

Description: Adult spread 30-40 mm. Head and thorax rufous mixed with white, tarsi ringed with white, abdomen generally brown. Forewing rufous suffused with gray and white (see illustration), veins white and brown. Hindwing fuscous brown, cilia white at tips; underside whitish suffused with rufous, a discoidal spot and curved postmedial line with a slight dark streak at the veins. Color of larva varies with stage. At first, head is brownish and body clear green.

After each molt the larva becomes more deeply colored, deep green to pale brown with scattered black dots and white dorsal line. Subdorsal line also white, sometimes double, black-edged. Spiracular line white, edged below with orange or yellow. (Prepared in Plant Pest Survey in cooperation with other ARS agencies.) CEIR 8 (51) 12-19-58



Damage to Pine by P. flammea



Adult Male (A), Larva and Eggs (B) of Panolis flammea.

Figures (except map): Larva and eggs from Koch, R. 1913. Tabellen zur Bestimmung Schädlicher Insekten an Kiefer und Lärche. 207 pp. Berlin. Adult from Hampson, G. F. 1905. Catalogue of the Noctuidae in the Collection of the British Museum. Vol. 5, 634 pp. Damage from Sachtelben, H. 1929. Monograph. zum Pflanzenschutz 3, 160 pp. Berlin.



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Cooperative
ECONOMIC INSECT
REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

A RICE DELPHACID (Sogatia orizicola) was collected for the second time at Belle Glade, Florida. The first collection was made during the fall of 1957. (p. 1021).

SPOTTED ALFALFA APHID still persists in Oklahoma and Kansas despite freezing weather. (p. 1021).

First MEXICAN FRUIT FLY of season trapped in Texas. (p. 1022).

GREEN PEACH APHID appeared about two months early in Dade County, Florida. (p. 1022).

KHAPRA BEETLE infestation reported in Riverside County, California. (p. 1023).

INSECT DETECTION: Pink bollworm collected for first time in Cleburne and Mississippi Counties, Arkansas. (p. 1022). Imported fire ant reported for first time in Horry County, South Carolina. (p. 1024).

SUMMARY OF INSECT CONDITIONS - 1958 - Illinois (p. 1025).

INSECTS not known to occur in the United States. (p. 1029).

WEATHER OF THE WEEK ENDING DECEMBER 22, 1958

Mainly of interest this week were the variations in the circulation pattern which developed welcome changes in the weather for some sections of the country. In California, where seasonal precipitation has been considerably below normal, a trailing front passing over the Pacific coastal area brought light to moderate rain to the northern two-thirds of the State and light snowfall to the central and northern Sierras. The widespread flow of Arctic air funneling into the country east of the Divide was interrupted for several days at the beginning of the period as a series of rather intensive low pressure disturbances moved along the Canadian Border. Temperature conditions in the central and northern Great Plains moderated considerably, except in the extreme northeastern section. Subzero minima that characterized the picture most of the last period were replaced during midweek by readings in the 20's and 30's. Farther to the east in New York, many locations observed the first above-freezing weather they have had since the 6th of the month. Weekly average temperatures for the most part were above normal over the western half of the Nation, and below normal over the East. The line dividing these conditions extended generally from southeastern New Mexico into southeastern Missouri and thence northwestward into central North Dakota. Greatest departures were +15° in north central Montana, and -13° at Sault Ste. Marie, Michigan, Burlington, Vermont, and Atlantic City, New Jersey. Daily record-high temperatures were observed on several dates and at several locations in California, with Fresno recording on the 15th an all time high of 75.9°F for the month of December. In contrast, southeastern sections of the country remained relatively cold most of the week. Freezing minimum temperatures were recorded on several nights as far south as the middle Gulf Coast and on the 18th and 19th into northern Florida.

Precipitation for the week was confined mainly to the northern half of the country, except for coastal Texas and Florida. Most falls were light, the main exceptions being coastal sections of the Northwest, and areas near Corpus Christi and Galveston, Texas and Miami, Florida. Moderate amounts were observed in the extreme northern Great Lakes region and along the coast of Maine, as a result of snows which occurred during the passage of storm centers over that area. The southern limit of the snow cover receded northward during the week and now generally extends from southwestern North Dakota to northern West Virginia, and thence northeastward to the northern New England coast. Snow cover has melted over most of the wheat section in Washington, but 1 to 2 inches still remain in the Big Bend area. Ice was reported thicker than usual for this time of year in Wisconsin with 12 to 21-inch measurements being observed in northern sections, and 9 to 10-inch measurements in southern areas. (Summary supplied by U. S. Weather Bureau.)

CEREAL AND FORAGE INSECTS

CHINCH BUG (Blissus leucopterus) - OKLAHOMA - Annual cooperative chinch bug hibernation survey conducted in 50 counties during December 3-16. Lincoln County had very severe rating (2,000 or more per square foot), and Cleveland, Hughes, McClain, Okfuskee and Seminole Counties rated severe (1,000 to 2,000 per square foot). Counts in other counties were lower. (Coop. Sur.).

GREENBUG (Toxoptera graminum) - OKLAHOMA - Averaged 0-7 per linear foot in scattered fields of fall-seeded wheat in central area. (VanCleave, Washum, Pennington). Light infestations found in fields in Fairview area. (Wood). INDIANA - Non-economic to light infestations in wheat fields in Knox County, November 6. (Deay, Osmun, Matthew).

APPLE GRAIN APHID (Rhopalosiphum fitchii) - OKLAHOMA - Averaged 0-12 per linear foot some fields of wheat in central area. (VanCleave, Washum, Pennington). Light in wheat fields in Fairview area. (Wood).

GRASSHOPPERS - TEXAS - Egg surveys in 10 counties bordering eastern New Mexico and the western panhandle counties in Oklahoma in general confirmed the results of the adult survey. (PPC, Sou. Reg., Nov. Rpt.).

A RICE DELPHACID (Sogatia orizicola) - FLORIDA - The second specimen was collected on October 20 in the Belle Glade area. The first specimen was collected in this same area in the fall of 1957. Determinations made by J. P. Kramer. TEXAS - Surveys in Chambers, Colorado, Jefferson, Liberty and Orange Counties have been negative. MISSISSIPPI - All specimens collected in the delta counties during survey in October have been negative. One inspection in Pearl River County also negative. Fourth treatment of two infested rice plantings in Hancock County completed during November. (PPC, Sou. Reg., Nov. Rpt.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - KANSAS - Populations ranged from 205 to 1,826 per 5 plants in north central area and from 427 to 652 per 5 plants in Riley and Pottawatomie Counties in northeastern area. (Simpson, Burkhardt). OKLAHOMA - Moderate to heavy infestations continue in alfalfa in central area despite sub-freezing temperatures and snow during the preceding weekend. (VanCleave, Washum, Pennington). Cold and snow of past week has not materially reduced populations in check fields in Stillwater area. (Bieberdorf).

SOYBEAN CYST NEMATODE (Heterodera glycines) - VIRGINIA - Delimiting surveys were initiated on November 17 in Nansemond County at the two known infested sites. (PPC, East. Reg.). Surveys were made on 40 acres in ALABAMA, 1,667 acres in ARKANSAS, 385 acres in GEORGIA, 406 acres in MISSISSIPPI, 734 acres in NORTH CAROLINA, and 847 acres in TENNESSEE during November. No newly infested counties were found, but two properties in North Carolina and one in Tennessee were found infested. All other inspections were negative. (PPC, Sou. Reg., Nov. Rpt.).

FRUIT INSECTS

COTTONY-CUSHION SCALE (Icerya purchasi) - CALIFORNIA - Light infestations on lemon trees in Folsom, Sacramento County. (Cal. Coop. Rpt.).

YELLOW SCALE (Aonidiella citrina) - CALIFORNIA - Heavy infestations on orange trees in Folsom, Sacramento County. (Cal. Coop. Rpt.).

MEDITERRANEAN FRUIT FLY (*Ceratitis capitata*) - Total of 13,070 traps in operation at end of November in FLORIDA. Trapping continued in ALABAMA, LOUISIANA, MISSISSIPPI and TEXAS. All specimens trapped in Florida negative; no suspicious specimens collected in other States. (PPC, Sou. Reg., Nov. Rpt.).

MEXICAN FRUIT FLY (*Anastrepha ludens*) - TEXAS - The first adult for the season, a male, was trapped in an orange grove 7 miles west of Hidalgo County on November 24. A total of 112 properties were trapped over the three citrus-producing counties using 2,084 traps. (PPC, Sou. Reg., Nov. Rpt.).

TRUCK CROP INSECTS

GREEN PEACH APHID (*Myzus persicae*) - FLORIDA - Adults and immature stages averaged 0 to 25 per leaf on potatoes northeast of Homestead, Dade County on December 5. Det. D. O. Wolfenbarger. The first aphids were observed in 1957 the latter part of December. They are about 60 days ahead of their usual appearance. (Fla. Coop. Sur.).

CABBAGE LOOPER (*Trichoplusia ni*) - FLORIDA - Averaged 1 per 12 linear foot of row in potatoes east and north of Homestead, Dade County. Reported as heaviest infestation noted so early on potato plants. Controls being applied. Infestations spotted on December 5, but may become general. (Wolfenbarger, Dec. 5).

WHITE-FRINGED BEETLES (*Graphognathus* spp.) - NEW JERSEY - Total of 721 acres of sweetpotatoes surveyed in Vineland, Landisville and Newfield areas during November. No specimens found. (PPC, East. Reg.).

GOLDEN NEMATODE (*Heterodera rostochiensis*) - NEW JERSEY - Samples processed in Middlesex County during November negative. (PPC, East. Reg.).

COTTON INSECTS

PINK BOLLWORM (*Pectinophora gossypiella*) - Positive collections were made in Cleburne and Mississippi Counties, ARKANSAS, for the first time. Inspections in ALABAMA, MISSISSIPPI and TENNESSEE were all negative. In OKLAHOMA, 56,929 acres were found infested for the first time. In TEXAS, lint cleaner inspections were made in 72 counties, averaging 49.05 pink bollworm larvae per inspection. (PPC, Sou. Reg., Nov. Rpt.). CALIFORNIA - During the week ending December 12, 1,045 bushels of gin trash were inspected in Kern and Imperial Counties. This phase of detection will be terminated on December 12. Lint cleaner inspections in 8 counties totaled 1,205 inspections. Blacklight traps were operated in 4 counties where cotton is still in the field aggregating 297 light nights. Green boll inspection in Kern County accounted for 1,800 bolls from 2,290 acres of cotton. (Cal. Coop. Rpt., Dec. 12).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

DOUGLAS-FIR ENGRAVER (*Scolytus unispinosus*) - CALIFORNIA - Douglas fir poles and standards showing "die-out" in small groups in forest areas in Coast Range in Santa Rosa area. The extended dry spell this season is probably a contributing factor in these cases. (Spharler).

RED TURPENTINE BEETLE (*Dendroctonus valens*) - CALIFORNIA - Scattered killing of large sugar pine trees in the Chowchilla Mountains in Mariposa County, resulting from previous logging activity. (Wyckoff).

APHIDS - CALIFORNIA - Medium infestation of *Essigella californica* on pine trees in Lancaster, Los Angeles County, and heavy infestation in Turlock, Stanislaus County. Heavy populations of *Prociphilus venafuscus* in flight in the Vacaville area of Solano County. (Cal. Coop. Rpt.).

SPIDER MITES - MARYLAND - Eggs, probably of *Oligonychus ununguis*, heavy on hemlock sent from Severna Park on December 17. (U. Md., Ent. Dept.).

A SCALE (*Fiorinia theae*) - TEXAS - Attacking holly trees in Fort Bend County. (Garner).

A LACE BUG (*Corythucha nicholi*) - ARIZONA - Eggs, nymphs and adults collected on chokecherry 10 miles northeast of Payson during September. R. I. Sailer reports as first collection since its description in 1928. (Ash).

A LYCTUS BEETLE (*Lyctus linearis*) - CALIFORNIA - A heavy infestation of adults occurred in wood sash in Redding, Shasta County. (Cal. Coop. Rpt.).

INSECTS AFFECTING MAN AND ANIMALS

CATTLE GRUBS (*Hypoderma* spp.) - INDIANA - Larvae found in backs of 17 out of 72 head of Montana feeder calves. Counts ranged from 0 to 13 grubs per infested animal. (Dobson, Matthew).

CATTLE LICE - UTAH - Severely infesting a herd of cattle near Logan, Cache County. (Knowlton).

SHEEP BOT FLY (*Oestrus ovis*) - KANSAS - Found in 4 lambs examined from Pottawatomie County. (Knapp, Peters).

TROPICAL RAT MITE (*Ornithonyssus bacoti*) - TEXAS - Annoying residents in Lavaca County. (Hybner).

STORED-PRODUCT INSECTS

KHAPRA BEETLE (*Trogoderma granarium*) - CALIFORNIA - Medium infestation of a property in Ripley, Riverside County. This is the second infestation in seven months. (Cal. Coop. Rpt.). No specimens were collected in 5 inspections in PENNSYLVANIA, 4 in CONNECTICUT and one in MASSACHUSETTS. Inspections were made on 29 sites in NEW YORK during November; 23 on Long Island and 6 in Rochester area. Inspections in western and Long Island sections of New York will be completed during December. Other sections of State will be inspected during winter months. (PPC, East. Reg., Nov. Rpt.). During November, 4 inspections were made in ALABAMA, 11 in Orange County, FLORIDA, and 37 in 14 counties in OKLAHOMA. All inspections were negative in Florida and Oklahoma. Determinations not received on specimens submitted from Alabama. (PPC, Sou. Reg., Nov. Rpt.).

FLAT GRAIN BEETLE (*Laemophloeus pusillus*) - TEXAS - Infesting stored milo in Hays County. (Watson).

MISCELLANEOUS INSECTS

IMPORTED FIRE ANT (*Solenopsis saevissima richteri*) - Horry County, SOUTH CAROLINA, found infested for first time during November. Treatment is scheduled as soon as delimiting surveys are completed. Treatments of infested properties were made in 8 States during November on about 41,000 acres. These treatments ranged from a few acres in ARKANSAS to nearly 26,000 in ALABAMA. Surveys were considerably stepped up in all States where extensive treatment programs are to begin in the near future. (PPC, Sou. Reg., Nov. Rpt.).

CARPET BEETLE (*Anthrenus scrophulariae*) - TEXAS - Found in attic of resident in Bexar County. (Wofford).

ELM LEAF BEETLE (*Galerucella xanthomelaena*) - OKLAHOMA - Beetles entering homes in Stillwater area. (Beiberdorf, Dec. 6).

LIGHT TRAP COLLECTIONS

	<i>Pseudaletia</i> <i>unipuncta</i>	<i>Agrotis</i> <i>ypsilon</i>	<i>Feltia</i> <i>subterranea</i>	<i>Heliothis</i> <i>zea</i>
FLORIDA				
Quincy 12/9	1	3		1
LOUISIANA				
Franklin 12/8		2	1	
Baton Rouge 12/12-18	4	13	1	
SOUTH CAROLINA				
Charleston 12/8-14	11	13	6	

SUMMARY OF INSECT CONDITIONS - 1958

ILLINOIS

This report is based on data collected by personnel of the United States Department of Agriculture, Agricultural Research Service, Agricultural Extension Service of the University of Illinois College of Agriculture, Illinois Natural History Survey, Farm Advisers and other cooperators throughout the State.

Highlights (C. E. White): Most important highlights this year were the unusually wet weather in the spring and continuing into early August in many parts of the State and the relatively low populations of field crop insects throughout the season. CLOVER SEED WEEVIL was collected in 1958 for the first time in the State. BLACK CUTWORM and GRAPE COLASPIS severely damaged many fields of corn. The latter was also destructive in soybean fields. STORED-GRAIN INSECTS were more abundant than for several years. ONION MAGGOT was very destructive to some onion plantings in the northeastern area. FOUR-SPOTTED SPIDER MITE was a general pest in apple orchards.

Clover and Alfalfa Insects (C. E. White): PEA APHID (Macrosiphum pisi) populations were higher from April to July than in 1957. Heavy rains in July reduced populations to very low levels and very little damage was caused in 1958. SPOTTED ALFALFA APHID (Therioaphis maculata) was not found in the State until the middle of October and then only in small numbers in southwestern counties. SWEETCLOVER APHID (Myzocallidium riehmi) was also found in small numbers in almost every sweetclover field surveyed. YELLOW CLOVER APHID (Therioaphis trifolii) was found in all sections, highest number being 20 per sweep. BLISTER BEETLE populations were extremely low throughout the season. CLOVER LEAF WEEVIL (Hypera punctata) larval populations were much lower than 1957 and slightly lower than 1956. The State average for larvae per square foot varied 1.6-3.4. Highest in any one field was 22 per square foot compared with 73 for 1957. However, an estimated 18,205 acres were treated for control in 1958. Profit from treatments was estimated at \$18,000. CLOVER HEAD WEEVIL (Tychius stephensi) was found in Whiteside County for the first time in 1958, which is the farthest western record for the State. CLOVER SEED WEEVIL (Miccotrogus picrostris) was also collected in Whiteside County, the first record for the State. CUTWORMS, mainly Peridroma margaritosa, were found in all sections of the State. Populations varied 0-1 per square foot, although one southern field had 7 per square foot. GARDEN FLEAHOPPER (Halticus bracteatus) was abundant in southern area clover and alfalfa. GRASSHOPPERS were generally light, 0-5 per square yard. However, on July 1, one southeastern area field had 134 small nymphs and a nearby field had 22 adults per square yard in mid-August. The annual fall survey showed non-economic populations in most of the State, except for small areas in the southeast, a narrow band in the central section and an area in the northern half of the State, which had light populations. LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) larvae infested 100 percent of the clover stems in many fields by early June. MEADOW SPITTLEBUG (Philaenus leucophthalmus) nymphs were more abundant in northern Illinois than in 1957. Several fields averaged more than 3 per stem. The annual fall adult survey is noted in CEIR 8(38):84. An estimated 18,570 acres were treated for control in the spring. The estimated profit resulting was \$32,500.

Adults of ALFALFA PLANT BUG (Adelphocoris lineolatus) and RAPID PLANT BUG (A. rapidus) were rather scarce. TARNISHED PLANT BUG (Lygus lineolaris) adults were rather light early in the season but built up to fair numbers by mid-June when as many as 15 per sweep were taken in one field. POTATO LEAFHOPPER (Empoasca fabae) was relatively light throughout the season. Very little yellowing of alfalfa was noticeable although an estimated 16,544 acres were treated at a profit estimated at \$24,800. An estimated 13,696 acres were

treated for control of SWEETCLOVER WEEVIL (*Sitona cylindricollis*) with an estimated profit of \$34,500. Populations of PREDATORY INSECTS were approximately the same in 1958 as in 1957. Although this was considered to be a relatively light year for insects, the following estimates have been made. These estimates are based on actual field observations this year and on production figures from the 1954 census. Seven and one-half percent of all clover and alfalfa fields in the State probably would have benefited by applications of insecticide to the forage crop and 100 percent of the red clover seed fields would have benefited from insecticide treatments. The total loss in hay production is estimated at 47,301 tons worth \$1,135,224. The cost of treating to prevent this loss is estimated at \$375,000. Therefore, the estimated profit if treatments had been applied is \$760,224. Of this amount it is estimated \$75,300 was actually collected due to the treatments that were applied. Also an estimated 43,815 bushels of red clover seed was lost due to insects. This was valued at \$1,095,375. Cost of treating the seed fields was estimated at \$255,370. This leaves an estimated profit of \$840,000 which could have been collected had all fields been treated.

Corn Insects (C. E. White): BILLBUGS damaged 60 percent of the plants in one field in southern Illinois and were relatively scarce elsewhere. CHINCH BUG (*Blissus leucopterus*) numbers were lower than for several years. It is estimated that only 1000 acres of small grain and corn were treated. CORN EARWORM (*Heliothis zea*) was very scarce until August at which time larvae averaged 20-30 per 100 ears in some southern fields. Very late corn was heavily infested in late August and September. A survey in September showed an estimated loss of 0.3 percent of corn produced for grain in the northern three-fourths of the State and a loss of 1 percent in the southern one-fourth, due to corn earworm, or an estimated loss of 233,038 bushels in the entire State. The value was approximately \$242,360 based on present market price. CORN FLEA BEETLE (*Chaetocnema pulicaria*) was relatively low, most fields having less than 1 beetle per plant during May and June. However, some fields had as many as 6 per plant. CUTWORMS, mainly *Agrotis ypsilon*, were very destructive in some areas and many fields had to be replanted. An estimated 103,385 acres were treated for control. The profit due to these treatments was estimated at \$516,925. EUROPEAN CORN BORER (*Pyrausta nubilalis*) was relatively low in 1958. A first generation survey in 18 counties showed an average of 11.9 borers per 100 stalks and a second generation survey in the same counties showed an average of 90.4 borers per 100 stalks. This is a ratio of first to second generation borers of 1 to 7.6. Approximately 0.7 percent (59,273 acres) of the corn fields in the State would have benefited by treatments to control first generation corn borers. Also 2.5 percent (216,773 acres) would have shown a profit from treatment for second generation borers. An estimated 37,093 acres were treated for control of first generation and 13,731 acres for second generation borers. The profit from these treatments was estimated at \$203,296. The fall survey showed an average of 73 borers per 100 corn stalks (based on average of 43 counties) or slightly more than the 66 per 100 stalks found in 1957. FALL ARMYWORM (*Laphygma frugiperda*) damaged some late planted corn in southern section before the corn tasseled and also by feeding in ear tips. GRAPE COLASPIS (*Colaspis* sp.) larvae damaged many corn fields in western and west-southwestern sections and scattered fields elsewhere. Colaspis were more abundant in 1958 than for several years. GRASSHOPPERS did very little damage to corn. The one exception was a southeastern field which averaged 8 *Melanoplus differentialis* feeding on rows 13 and 14 in mid-August. The first 8 rows had an estimated 80 percent of the leaf surface removed, all the silk was removed from ear tips and shucks and kernels eaten half way down the side of many ears. ROOTWORMS (*Diabrotica* spp.) damaged several fields of corn, especially in central Illinois. WIREWORMS damaged a few widely scattered fields. YELLOW-STRIPED ARMYWORM (*Prodenia ornithogalli*) was reported to have damaged 90 percent of corn plants in one southwestern field. An estimated 780,383 acres were treated at an estimated profit of \$1,950,957.

Small Grain Insects (C. E. White): ARMYWORM (Pseudaletia unipuncta) occurred throughout the State in small numbers and in a few localized areas became very destructive to wheat and barley. Parasites and disease were abundant in most areas and played a large part in preventing a serious outbreak. An estimated 47,506 acres were treated for control, resulting in a profit estimated at \$95,012. CHINCH BUG was very scarce throughout the season. ENGLISH GRAIN APHID (Macrosiphum granarium) was present throughout the State. Populations ran as high as 50 per sweep in wheat and oats and 22 per head of wheat but apparently caused no damage. HESSIAN FLY (Phytophaga destructor) continued its downward trend in 1958. The annual survey showed a State average of 2.91 puparia per 100 tillers compared with 6.28 in 1957 and 15.49 in 1956. WHEAT JOINTWORM (Harmolita tritici) infested an average of 6.13 percent of the wheat stems in the State.

Soybean Insects (C. E. White): Populations of BEAN LEAF BEETLE (Cerotoma trifurcata), GREEN CLOVERWORM (Plathypena scabra), GRASSHOPPERS (Melanoplus spp.) and WHITE GRUBS (Phyllophaga spp.) were all rather scarce and caused very little damage. GRAPE COLASPIS (Colaspis sp.) larvae, however, caused considerable damage to soybeans in western and west-southwestern areas.

Fruit Insects (Ronald Meyer): Moderate temperatures and little rainfall during the hatch of ROSY APPLE APHID (Anuraphis roseus) lead to serious infestations, especially in the southern third of the State. APPLE APHID (Aphis pomi) was numerous and in a few orchards became abundant enough to curl the leaves of most terminal growth and honeydew caused blackened leaves. During early season, shortly before bloom, rainfall was regular and generous and tended to depress an average carry over of RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) and CODLING MOTH (Carpocapsa pomonella). There was very little difference in stage of development from south to north during early season growth. However, there was a scattering of serious red-banded leaf roller infestation in late summer. Prevailing dry weather during late July and early August coupled with a cessation of spraying, allowed the third brood to build up sufficiently to cause destructive populations during the fourth brood. TARNISHED PLANT BUG (Lygus lineolaris) and STINK BUGS were plentiful during early season on peaches. PLUM CURCULIO (Conotrachelus nenuphar) was normal in southern two-thirds of State with generally good control maintained by growers, but was unusually numerous in several northern areas where considerable damage resulted. APPLE MAGGOT (Rhagoletis pomonella) adults were very numerous during mid-August in northern Illinois and several commercial orchards were infested at that time. STRAWBERRY LEAF ROLLER (Ancyliis comptana fragariae) was not serious and ORIENTAL FRUIT MOTH (Grapholitha molesta) was generally light in 1958. MITE damage varied from practically none to very destructive. PHYTOPHAGOUS MITES continued to be a major problem for apple growers. Winter egg carry over of EUROPEAN RED MITE (Panonychus ulmi) populations varied from zero to very dense. FOUR-SPOTTED SPIDER MITE (Tetranychus canadensis) was present in all apple orchards and one peach orchard examined in southern and west central areas along the Mississippi River. This is the first year this species has been a general pest although it was destructive in a commercial orchard in 1955. The first record of the mites in 1958 was taken May 26 at Carbondale. On June 28, a population averaged 2,498 mobile mites and 2,986 eggs per 100 leaves, but damage did not become generally noticeable until the latter half of July and early August. With a high population going into the winter, damage may show up earlier in 1959. No destructive populations of TWO-SPOTTED SPIDER MITE (Tetranychus telarius) were found in southern areas although several were found in northern areas.

Truck Crop Insects (W. H. Luckmann): With a few exceptions insect infestations on truck and canning crops were generally below normal. ONION MAGGOT (Hylemya antiqua) injury was very severe to onions grown for sets and green bunching onions. Maggots were apparently resistant to certain insecticides. BEEET LEAFHOPPER (Circulifer tenellus) was very damaging on horseradish in the East St. Louis area. ASPARAGUS BEETLE (Crioceris asparagi) and SPOTTED

ASPARAGUS BEETLE (C. duodecimpunctata) were light except locally in northern areas. CORN EARWORM and/or TOMATO FRUITWORM (Heliothis zea) populations were below normal. EUROPEAN CORN BORER (Pyrausta nubilalis) caused little damage to canning corn. SAP BEETLES (Carpophilus spp.) were locally heavy only in southwestern and northeastern sections. CORN LEAF APHID (Rhopalosiphum maidis) was very abundant but apparently caused no damage. CORN FLEA BEETLE (Chaetocnema pulicaria) populations were below normal and only damaging in usual southern localities. STRIPED CUCUMBER BEETLE (Acalymma vittata) and SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) appeared in fields 7-10 days later than normal and caused only moderate damage. SQUASH BUG (Anasa tristis) was rarely present in economic numbers. Damage by MELON APHID (Aphis gossypii) was light. No treatments were needed for PEA APHID (Macrosiphum pisi) on canning peas, which is unusual. POTATO LEAFHOPPER (Empoasca fabae) was less abundant than in past years. IMPORTED CABBAGEWORM (Pieris rapae) and CABBAGE LOOPER (Trichoplusia ni) were normal. DIAMONDBACK MOTH (Plutella maculipennis) was the most prevalent Lepidoptera on cabbage. CUTWORM damage was common but not severe in the spring. Damage by the BEAN LEAF BEETLE (Cerotoma trifurcata) and MEXICAN BEAN BEETLE (Epilachna varivestis) was conspicuous but not extensive.

Forest, Ornamental and Shade Tree Insects (L. L. English, Robert Snetsinger, and C. E. White): EASTERN TENT CATERPILLAR (Malacosoma americanum) began emerging in northern part of State about April 23. Tents and defoliation were very common in many areas later in the season. PINE NEEDLE SCALE (Phenacaspis pinifoliae) was abundant on Scotch pine near Rockford, in mid-April. A few SPIDER MITES were also present. CATALPA SPHINX (Ceratomia catalpae) almost completely defoliated many catalpa trees in east-southeast and southeast sections of the State. YELLOW-NECKED CATERPILLAR (Datana ministra), not as abundant as in 1957, was still quite noticeable in some areas. WALNUT CATERPILLAR (Datana integerrima) partially to completely defoliated many black walnut trees in northern half of State. FALL WEBWORM (Hyphantria cunea) nests were very conspicuous in many parts of the State. BAGWORM (Thyridopteryx ephemeraeformis) appeared later than usual and, although not as abundant as in the past few years, severely damaged many untreated trees. COTTONY-MAPLE SCALE (Pulvinaria innumerabilis) was more abundant than usual. MIMOSA WEBWORM (Homadaula albizziae) was found at Mounds, Pulaski County. MAPLE BLADDER-GALL MITE (Vasates quadripedes) was fairly numerous. Kermes spp. were abundant on oak in northern Illinois.

Stored-Grain Insects (Stevenson Moore): Stored-grain insects were more abundant in 1958 than for several years, due probably to the fact that grain went into bins with a higher moisture content than usual. INDIAN-MEAL MOTH (Plodia interpunctella) was present in all untreated, and many treated bins of 1958 wheat within 6 weeks after harvest in the southern half of the State. In 7 untreated bins of wheat in this area insects averaged 18 per 2-quart sample. The following were found in these samples and are listed in descending order of abundance: INDIAN-MEAL MOTH, a FOREIGN GRAIN BEETLE (Ahasverus advena), RUSTY GRAIN BEETLE, SAW-TOOTHED GRAIN BEETLE, a HAIRY FUNGUS BEETLE (Typhaea stercorae), FLAT GRAIN BEETLE, RED FLOUR BEETLE, CADELLE BEETLE and RICE WEEVIL. On many farms feed storage rooms or old feed sacks yielded high numbers of YELLOW MEALWORM (Tenebrio molitor) and DARK MEALWORM (T. obscurus). Grain insects of one kind or another were found in various locations on all farms inspected. Thirty-five farms were involved in this survey.

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

APPLE THRIPS* (*Thrips imaginis* Bagnall)

Economic Importance: Outbreaks of this species, which is indigenous to Australia, cause extensive damage to pears, apples and other fruits during some years. Sometimes attacks by *T. imaginis* will completely destroy the setting of young fruits. The attack was so severe in Victoria during 1926 that all fruit crops, including strawberries and cane fruits, were a complete loss. *T. imaginis* is chiefly a pest in the spring and early summer, but severe outbreaks may occur in the autumn. As many as 2,800 per rose blossom have been found in Sydney during October. Damaging populations depend largely on meteorological conditions. If weather is unfavorable during October and November, thrips will not be serious even if large numbers survive the previous winter. A warm, wet, autumn favors a buildup, and often immense swarms will appear when these conditions are encountered. The species does not appear in damaging numbers in Tasmania.

Distribution: Occurs throughout southern Australia and Tasmania.



General Distribution of *Thrips imaginis*

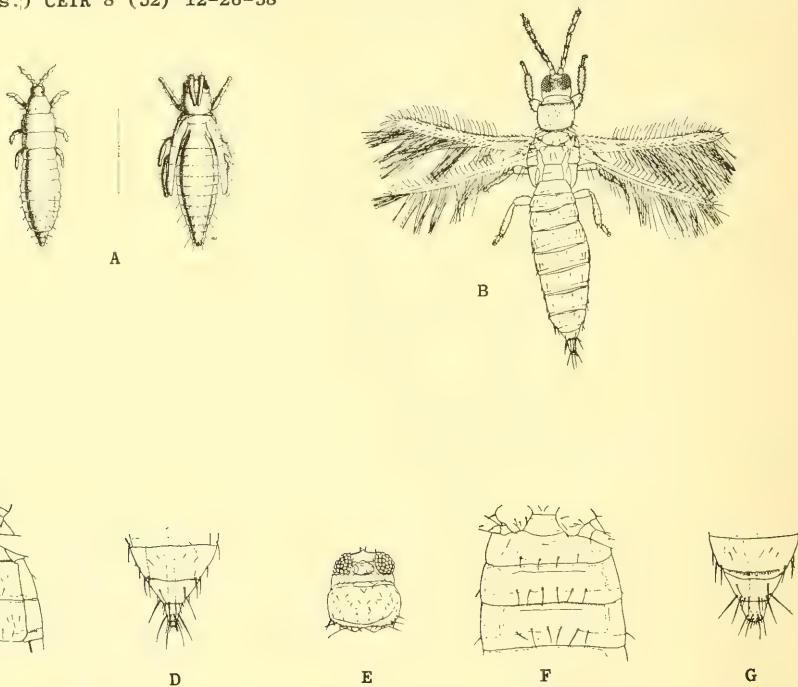
Hosts: Attacks the flowers of many plants; most serious on deciduous fruits though occasionally it becomes serious on other crops such as tomatoes and strawberries.

Life History and Habits: The adults may be found throughout the year in South Australia, but populations fluctuate according to climatic conditions. Egg laying occurs through the female's life span, the average number varying from 186 to 251. Eggs are laid in the tissues of the flowers, including the stamens and pistils, and occasionally on young tender leaves of host plants. Newly hatched nymphs feed on epidermal cells causing a "browning" of the petals and destruction of the stamens and pistils. During an infestation year, 150 individuals may be present in each blossom. After passing through the second nymphal stage, the insect leaves the plant and enters the soil to pupate. Immature development varies considerably, the average being about 10 to 12 days at 23° C. Diapause is passed in the pupal stage in the soil or in the adult stage in sheltered conditions. Activity increases rapidly during the first warm days in the spring. The extent of spring peaks depends upon the extent of the previous autumn population, survival during the winter and character of the prevailing spring weather. Several other species of thrips

*Also called plague thrips. (Thripidae, Thysanoptera)

inhabit blossoms in association with T. imaginis; particularly T. tabaci which closely resembles this species.

Description: Adult female about 1 mm. long and about .25 mm wide at thorax. Anterior portion of body golden-brown with reddish tinge; posterior area brownish-yellow to darker brown. Newly emerged adults yellowish. Male smaller and lighter in color than female; abdomen pale-yellow. T. imaginis adults may be separated from T. tabaci as follows: T. tabaci have only primary setae on abdominal sternites 2-7, consisting of row of 6 setae across posterior margin of segment. T. imaginis has primary setae and in addition an irregular accessory row of setae across the middle of sternites 2-7 (often only 1 or 2 on sternite 2). Accessory setae are finer and shorter than primaries. Ocellar crescents bright red in T. imaginis and gray in T. tabaci. Gray color in T. tabaci often difficult to see because of orange internal pigment behind, but pigment usually present elsewhere in body. No similar pigment in body of T. imaginis like that in ocellar crescents. Nymphs of T. imaginis generally orange-yellow and T. tabaci lemon-yellow. (Prepared in Plant Pest Survey in cooperation with other ARS agencies.) CEIR 8 (52) 12-26-58



Nymph, Pupa (A) and Adult (B) of T. imaginis. Anterior Abdominal Sternites (C), Posterior Abdominal Tergites (D) and Head and Prothorax (E) of T. imaginis. Anterior Abdominal Sternites (F) and Posterior Abdominal Tergites (G) of T. tabaci.

Figures (except map): Adult, head, prothorax, sternites and tergites from Vevers Steele, H. 1934. Austral. Council for Sci. and Indus. Res. Pamph 54, 59 pp. Nymph and Pupa from Davidson, J. 1936. South Australia Dept. Agr. Jour. 39(7): 930-939.

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The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearinghouse and does not assume responsibility for accuracy of the material.

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5	150, 325, 393, 491, 569	4, 17, 45, 56, 72, 77, 106,
<u>Acalymma</u> <u>trivittata</u> (western striped	<u>Aedes</u> <u>cantator</u> (brown salt-marsh	112, 128, 138, 146, 169, 175,
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<u>Acalymma</u> <u>vittata</u> (striped cucumber	<u>Aedes</u> <u>cineurus</u>	262, 283, 284, 287, 302, 307,
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758, 947, 986, 1014, 1028	519, 548	521, 530, 542, 543, 550, 556,
<u>Acarus</u> <u>siro</u> (grain mite)	<u>Aedes</u> <u>dupreei</u>	563, 571, 576, 578, 588, 596,
56, 86, 1001	931	605, 620, 634, 640, 641, 649,
<u>Aceratagallia</u> sp.	<u>Aedes</u> <u>exrucians</u>	662, 682, 683, 706, 707, 729,
814	393, 458, 569	730, 749, 772, 792, 800, 806,
<u>Aceratagallia</u> <u>sanguinolenta</u> (clover	<u>Aedes</u> <u>fitchii</u>	825, 838, 839, 856, 869, 880,
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361, 445, 533, 716, 739, 781,	<u>Aedes</u> <u>flavescens</u>	983, 996, 997, 999, 1009,
814, 1013	458	1013, 1014, 1024, 1026
<u>Aceratagallia</u> <u>uhleri</u>	<u>Aedes</u> <u>implicatus</u>	<u>Ahasverus</u> <u>advena</u> (a grain beetle)
175	416	837, 882, 982, 1028
<u>Aceria</u> sp. (a mite)	<u>Aedes</u> <u>niromaculalis</u>	<u>Alabama</u> <u>argillacea</u> (cotton leafworm)
725	325, 519, 618, 701, 726, 747,	45, 85, 95, 98, 175, 181, 218,
<u>Aceria</u> <u>ajugae</u>	837	222, 243, 287, 373, 543, 636,
73, 81	<u>Aedes</u> <u>puncator</u>	637, 677, 744, 766, 803, 869,
<u>Aceria</u> <u>litchii</u>	393	881, 884, 893, 898, 930, 943,
170	<u>Aedes</u> <u>solicitans</u> (salt-marsh	957, 970, 987
<u>Aceria</u> <u>paradanthi</u>	mosquito) 8, 46, 244, 325,	<u>Aleurocanthus</u> <u>woglumi</u> (citrus
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<u>Aceria</u> <u>tulipae</u> (wheat curl mite)	548, 618, 660, 701, 747, 821,	210, 329, 342, 451, 562, 695,
22, 113, 275, 812, 863, 1001	853, 896, 931, 968, 1015	762, 849, 892, 964
<u>Acheta</u> <u>assialis</u> (a field cricket)	<u>Aedes</u> <u>spenceri</u>	<u>Aleurochiton</u> <u>forbesii</u> (a whitefly)
308, 748, 791	21, 458	1012, 1015
<u>Acheta</u> <u>domestica</u> (house cricket)	<u>Aedes</u> <u>sticticus</u> (floodwater	<u>Aleurolobus</u> <u>barodensis</u> (sugarcane
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31, 368, 832	198, 393, 491	235, 763, 801
<u>Acidia</u> <u>heraclei</u> (celery fly)	<u>Aedes</u> <u>trivittatus</u>	<u>Allantus</u> <u>cinctus</u> (curled rose sawfly)
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<u>Acleris</u> <u>lipsiana</u> (a tortricid)	<u>Aedes</u> <u>vexans</u>	<u>Alphitobius</u> <u>diaperinus</u> (lesser
538	8, 21, 115, 119, 197, 214,	mealworm) 681, 805, 837
<u>Acleris</u> <u>variana</u> (black-headed	458, 491, 548, 569, 618, 640,	<u>Alphitophagus</u> <u>bifasciatus</u>
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<u>Acontia</u> <u>dacia</u> (brown cotton leafworm)	<u>Aelia</u> <u>rostrata</u> (a pentatomid)	7, 10, 60, 197, 415, 437, 488,
414, 467	136	517, 955
<u>Acrobasis</u> <u>caryae</u> (pecan nut	<u>Aeolopodius</u> <u>turnbulli</u> (a grasshopper)	<u>Altica</u> sp. (a chrysomelid)
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